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Thorner's Litton

A Dissenting School in Dorset

C. J. BAILEY

INTRODUCTION

This paper is written to mark the 300th anniversary of the founding of one of Dorset's oldest surviving village schools. In 1953 the writer was appointed head of the Litton Cheney Church of England Primary School. He soon became aware, however, that despite its name it was in fact the continuation of an independent endowed school founded in 1690 by one Robert Thorner. The following summary of its history is based on research over a long period and records its strange, perhaps unique, metamorphosis from an early dissenting foundation to that of the present school with Salisbury Diocesan Education Committee as Trustees.

CHARITY SCHOOLS IN DORSET VILLAGES

The report on the state of charity schools resulting from inquiries made in the early 1800s (Dorset Vol 1839) gives details of twenty charitable foundations in Dorset villages.

Three of these were designated as 'classical'. The oldest was the Free School at Evershot, founded by Christopher Stickland in 1628, who by deed recited his intention 'to have a free school for reading, writing and grammar erected and settled within the town of Evershot where he was born, for the instruction and breeding of men children . . . a schoolmaster there for ever to train up, instruct and teach the same children in good learning, true religion and the fear of God.' At Broadwindsor in 1725 Robert Smith gave by will certain lands and a message to be converted into a school-house 'fit and convenient for the schoolmaster to live and teach school therein for the instruction of youth for ever in the English, Latin, Greek and Hebrew tongues'. The property was vested in the vicars of Burstock and their successors for ever.

At Litton Cheney Robert Thorner, by will dated 31st May 1690, bequeathed all his real estate in the City of London to his executors, the rents from part of which were to be employed towards the maintenance of a free school in Litton, Dorsetshire, to teach the male children of the said parish to read, write, cast accounts and grammar from the age of six to fifteen.

The remaining seventeen charity schools were described as non-classical. All taught reading, writing and arithmetic and almost all had close links with the established church under the direction of the village parson. Thorner's however was an outstanding exception owing to no allegiance to the local church and stoutly resisting attempts to persuade it to teach the catechism and become subject to religious inspection by the Diocesan Authority.

The founders of most of these early charity schools clearly relate to their respective localities. Thus Stickland was born at Evershot and it is clear that relatives were still living in the area though he himself was described as 'of Yealdon, County Bedford'. By contrast, Hutchins' detailed account of the Thorner bequest to Litton Cheney (Vol II 750-1) gives no information whatever of the man himself or any clue as to his relationship with the village which he remembered in his will. Neither does local tradition help.

ROBERT THORNER AND LITTON CHENEY

Reference to Robert Thorner was made in some notes on the history of Litton Cheney by a former Rector (Daniell, 1952, 13):

'in the 17th century this village produced a large-hearted benefactor. He was Robert Thorner who was christened in Litton Cheney Church in 1621 and who died in 1690. He left an endowment for the education of the village children. The school is still known as "Thorner's Charity". He also left money to start boys in life by providing them with an outfit of clothing and help in their apprenticeship in a trade. His benefactions extended to Dorchester, Salisbury and Southampton. Indeed, 87 elderly women live in his almshouses in Southampton. His generosity extended even further afield for he left a generous legacy to Harvard University, USA.

It is interesting to note his link with Isaac Watts, the hymn writer. Robert Thorner was co-deacon with Watts' father in the first Congregational Church in Southampton'.

Most of this information could have been deduced from the outline of the Thorner will in Hutchins but the last paragraph suggests

that the writer, a keen local historian, knew something of his association with the Independent Congregation at Southampton. The booklet from which it is taken has no references but it seems almost certain that if the writer had been able to explain the Thorner family's presence in Litton he would have done so.

THE LITTON REGISTERS

By strange coincidence two 'Robert Thorners' appear quite close together in the baptism register for the early 1600s.

1. Robert, son of Frances Thorner and Mary his wife was baptised 18 November 1621.
2. Robert, son of John Thorner and Ruth his wife was baptised 29 September 1633.

From the date of birth given in the above quotation, Canon Daniell must have known that our Robert Thorner was 69 when he died, thus making the first entry relevant. However with no source of information given, the date of death had to be confirmed. It is important at this point to add that there are two further significant entries in the registers.

1. Christian, daughter of Frances Thorner and Mary his wife was baptised 25 July 1624.
2. Mary, wife of Robert Thorner buried 6 August 1624.

It would therefore appear that Robert Thorner's mother died as the result of the birth of her next child. Since there are no further entries relating to the family Frances must have left Litton, probably for London. We know that he remarried and had a daughter Anne (see below).

ROBERT THORNER AT BADDESLEY

'I, Robert Thorner, of Baddesley in the county of Southampton . . . ' thus begins his will dated 31 May 1690, North Baddesley then being a village some five miles north of the centre of the town of Southampton.

Correspondence with the present rector (Rev. J. R. Tarr) of that parish confirmed that he was buried in the churchyard there 'with his two wives so I have been told by various parishioners'. Reference to the registers of the parish in the Hampshire Record Office showed his burial to have been in July 1690 (full date not given) and a visit to North Baddesley churchyard indeed showed his table-tomb between two others with the simple inscription:

Here lyeth the body of Robert Thorner,
gent, who died the 17th July Anno Dom
1690 in the 69 year of his age.

The top slab of the tomb has been recently renewed and carries the inscription which is obviously a copy of the original.

The lettering on the other tombs has long since been obliterated by weathering but reference to the Baddesley registers found a burial entry for Elizabeth, wife of Robert Thorner, in September 1687. The rector's reference to two wives is corroborated by an entry in the register of a marriage between Robert Thorner and Rachel Durmond on Christmas Day 1689. His burial was recorded in July 1690. The second tomb is no doubt hers, despite the fact that a general search of the register between 1682 and 1742 revealed no further baptism, marriage or burial entries for the Thorner family. She may, of course have remarried.

From the above we may deduce that Robert came with his elderly wife Elizabeth to North Baddesley some time before her death in 1687. His second marriage, fifteen months later, was certainly to a much younger woman as in his will he makes provision not only for her but also for a possible child. The will was made five months after the marriage and in another two Robert was dead.

It is tempting to think of their marriage as one of an elderly and frail man marrying a young woman for the sake of a house-keeper but in his will he refers to her as 'my lawful and loving wife Rachel' and leaves her £500, his tenement and lands at Pitton, near

Salisbury, and 'all my household stuff to dispose of'. This latter suggests that he was only a tenant of his residence at Baddesley, no mention being made of a house. Certainly Robert Thorner had retired to Baddesley from London. A later pastor of the Congregational Church at Southampton (Adkins 1836, 130) wrote: 'The health of Mr. Thorner having become infirm he resorted for its restoration to the quietude and salubrity of a rural residence; and chose Baddesley in the vicinity of Southampton as his place of retreat'.

THORNER IN LONDON

No one, as far as the writer is aware, has been able to fill in with any detail the sixty or so years between his baptism at Litton and his retirement to Baddesley.

Several sources describe him as a London merchant. However, they give no indication of the kind of goods in which he traded so successfully that he was able to acquire property and build up a considerable fortune. Much later (Adkins, 1830, 130) his London property was thus described:

'The estate belonging to this charity (i.e. the trust set up by his will) consists of a parcel of land with several houses, shops and stalls erected thereon forming part of Leadenhall country and market situate in the parish of All Hallows, Lombard Street'.

The lack of interest in his earlier years may perhaps be explained by the fact that he has been remembered for his generous bequests rather than for the way in which he acquired the wherewithal to make them. Moreover the full value of his generosity was not realised until the surrender date of the leases on the property in 1769. By that time memory of the benefactor himself must have become very dim.

ASSOCIATION WITH THE DISSENTING MOVEMENT

Thorner's life span in fact coincided with the growth of dissent from the established church. In 1662 the Act of Uniformity resulted in many ministers being deprived of their livings and gave impetus to the dissenting movement and the setting up of independent meetings. At first these had to struggle against laws making it an offence to attend them but in 1689 the Toleration Act allowed such meetings provided the place of worship was registered. In his will, drawn up in the year following the passing of the act, Thorner was thus able to give real support to the newly formed Congregational church at Southampton. It is from the early records of that church that we learn something, albeit tantalisingly little, of the man himself.

In 1836 a pastor of the church (Adkins, 130) described him as 'a man of eminent piety, of irreproachable conduct and extensive benevolence' who had resided in the metropolis in earlier life 'where by blessing of providence on his labours he accumulated a considerable property which he faithfully employed for the glory of the giver and the good of mankind'.

A later source (Silvester Davies, 307) describes Robert Thorner as a member of an independent congregation in London meeting in Girdler's Hall who retired to Baddesley bringing with him a letter of commendation from the pastors and deacons of the London Congregation to the Independent Congregation in Southampton. The letter was dated 17th July 1688. Mr. Thorner was appointed an elder at the organisation and settlement of the Above Bar church in August of the same year.

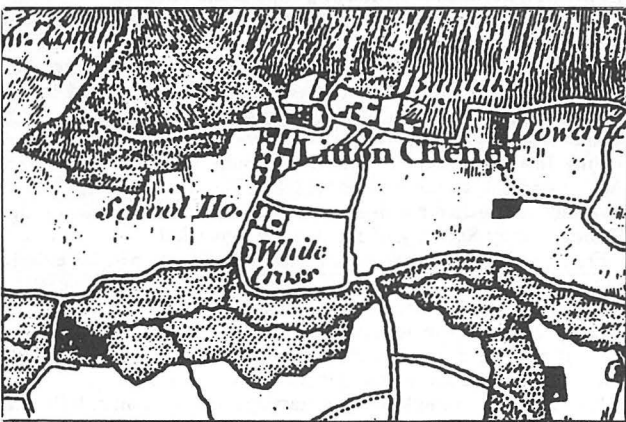


Plate 1. The first edition of the 1" Ordnance Survey map (1811) identified Hill Close and named the School House.

The letter is quoted in full by Adkins as 'an honourable testimony to the excellency of the man to whom it refers'. It begins, 'Whereas, Mr. Thorner, having several years since, given himself up to the Lord, and to us by his will, and during all those years walked worthy of that holy profession among us, and in order to his sitting down with us, he made, and indeed obtained the help of God to render himself, in and by the occasional exercise of his gifts and graces, exemplarily useful, and a special blessing to our whole fellowship, insomuch that he hath been singularly beloved by us . . .'

If we take 'several years' literally to mean 'a moderate number, more than two but not many' (Oxford Dict) then it would seem that he became a member of the Independent Congregation quite late in life. The sources quoted above seem to suggest that Thorner joined the Above Bar congregation on leaving London. However, we have already noted the death of his first wife in Baddesley in September 1687 – ten months before the letter of commendation was written.

Reading between the lines, one gets the impression that Thorner, even before he came to Baddesley, was no stranger to the congregation at Southampton where he was so soon accepted and made one of the first officials of the church. It might be argued that the need for a reference was to the contrary but such a testimonial was described (Adkins, 130) as 'an illustration of the mode of procedure then employed, and still perpetuated amongst Congregational churches on occasions of a similar nature'.

THE THORNER WILL

Hutchins quotes at length the passages relating to the founding of the school and the setting up of the apprenticing charities. However, a copy of the full will having been obtained, two further minor bequests were found relevant to Litton.

1. 'item . . . and I bequeath to my sister Katherine Begon the interest or use arising from one hundred pounds for the term of her natural life, which sum I appoint my Executors to put out to interest and to pay the interest money arising therefrom to Mr. John Filer of Litton in the county of Dorset to be paid by him for and toward my sister's subsistence, and after her decease I bequeath the said sum to the grandchildren of my said sister to be equally divided among them'.

The name is most unusual. Katherine does not appear in the Litton registers but the name occurs three times between 1614 and 1684. When it does it is always 'alias Jacob'. The inference from this bequest is that Katherine in 1690 was an ageing widow unable to look after her own affairs and was perhaps an older sister who had married and stayed on at Litton.

2. 'item . . . and I bequeath to Mr. John Filer, minister, and Mr. Richard Meadway of Litton, Co. Dorset twenty shillings to each of them to buy things in remembrance of me'.

John Filer M.A., Trinity College, Oxford followed his father as rector of Litton in 1680. He died and was buried in Litton in May 1690 – fifteen days before the Thorner will was dated. No record has been found of Richard Meadway.

These bequests would seem to suggest that Robert Thorner must have visited Litton often enough to maintain a close friendship with the two men and perhaps keep an eye on his sister.

The will also mentions another sister: 'item . . . I give unto my sister Mary Thorner of Blackffryers, London three shillings per week to be paid out of my estate during the term of her natural life'.

Obviously Mary had never married; one might suggest that since she was named after her mother she may have been the oldest of the children of Robert Thorner the elder by his first marriage.

ROBERT THORNER AND THE HOLLIS FAMILY

The four executors appointed by the Thorner will were Bennet Swain, fishmonger and citizen of London, Thos. Hollis jun. of London, Isaac Watts and John Brackstone, clothier, of Southampton. These were also to be trustees of the estate who would administer the various charities. Each of them, before his death, was to nominate a successor 'to undertake the trust in his place from time to time after his decease for ever'.

Isaac Watts was, as we have already seen, co-elder with Robert Thorner of the Above Bar Congregational Church in Southampton. He was the father of Isaac Watts the eminent Free Church minister. Thomas Hollis is most relevant to this paper as he was the founder of the London family of prominent nonconforming laymen who, in turn, according to the instruction in the will, administered, and indeed greatly furthered, the charities set up by it.

At this point the writer should relate how, in the early days of this research, he was visited by Malcolm Mercer of Sheffield who

had been studying the history of education in South Yorkshire in the eighteenth century. At the time of the visit he was preparing a paper on the Hollis Educational Trust (Mercer 1985) which had founded and maintained an educational charity in Sheffield and Rotherham.

During his search he had discovered that the founder of the Trust, Thomas Hollis, had married Anne, a sister of Robert Thorner in 1658. His visit to Litton Cheney was prompted by his finding a reference to a Dorset school among the Hollis papers. He hardly expected to find the school let alone someone who had taken a great interest in its story. Much of this paper, where it relates to the Hollis family, is based on invaluable information which he subsequently made freely available; to him the writer is greatly indebted.

Anne is not mentioned in the Thorner will. She certainly was alive at the time of his death and it may well be that, having married into a thriving merchant family, there was no need to make provision for her. She must, of course, have been Robert's half-sister, his father having married again after the death of his mother at Litton in 1624.

In his will, Robert left a tenement and lands at Pitton, near Salisbury, Wilts to his wife. Since it was just possible that his father had moved to Pitton from Litton and that Anne had been born there a search was made of the Pitton records in the Wilts Record Office at Trowbridge. Unfortunately, the parish registers did not begin until 1661 (we know that Anne was born in 1649). Further search among other relevant records failed to find a Thorner there.

Mercer, in his paper, records (p.68) that Thomas Hollis, executor of the Thorner will and trustee of the charities set up by it was born in 1634, the son of a Rotherham whitesmith. While serving an apprenticeship with his mother's brother, a Sheffield cutler, he lived with the family. The Ramskars worshipped at the Sheffield parish church where they were influenced by the vicar James Fisher, later to be ejected for non-conformity. As a result Thomas Hollis was 'affected and converted'. In 1654 he was sent to the Ramskar London office where he settled and set up a successful business of his own. In 1658 he married Anne Thorner and together they worshipped in Pinner Hall, a meeting place for many distinguished nonconformists and a celebrated centre of moderate theology.

It seems certain therefore that Thorner was introduced to the Hollis family by Anne's marriage. Then, if he had not already done so, he became, like his brother-in-law, an ardent nonconformist and their subsequent lives show a remarkably similar pattern. Thus, besides sharing the same ideas about worship both were London merchants, Thomas being a draper but retaining his links with the Sheffield cutlers. Both realised the value of education and endowed charity schools, Thorner at Litton and Hollis at Rotherham and Sheffield. Both men supported the University of Harvard in New England and set up almost identical trusts providing almshouses and pensions for poor widows, Thorner at Southampton and Hollis in Sheffield. Each was a close friend of the Watts

family, Thorner with the father in Southampton and Hollis with the more famous hymn-writer son who subsequently lived with him and Anne between 1700 and 1710, their home being close to St. Botolph's Church, Aldgate.

It seems clear that Hollis, in the course of executing Robert Thorner's will, was greatly influenced by it, copying closely the founding of the educational trust and the almshouses. Unlike Thorner, he had a son to follow him – another Thomas (1659-1731). The latter died childless and his wealth and the conduct of his affairs, including the Hollis Trust passed to his brother Nathaniel. He, in turn, had a son Thomas who died in 1735 and a grandson yet, another Thomas, who was none other than the Thomas Hollis who died in 1774 at Corscombe in West Dorset having retired to Urles Farm in 1770. He is the subject of a lengthy memoir in Hutchins (II, 96-98). His relationship with Dorset is best described by Dorothy Gardiner (Gardiner, 90-92). For our immediate purpose, we may refer to a source quoted by Mercer (Robins, 416-7):

'After early schooling, and a period in Amsterdam, Thomas Hollis lived for a short while with his cousin Timothy in Ormonde Street, London. His education was later extended by attending the classes of Dr. John Ward, Professor of Rhetoric at Gresham College. In February 1738 he moved to Lincoln's Inn where he remained for over ten years though there is no evidence that he practised law. By that time he could speak French, Dutch, Italian and German and read Latin and Greek. He had acquired a taste for art and antiquity, a passionate love of civil and religious liberty, possibly influenced by his family and the preachers at Pinner's Hall, and an affection for puritan America and for Harvard University'.

As we shall see later, it was this Thomas who, with his cousin Timothy, built the school house at Litton which still stands today and was the home of the writer for 25 years. In doing so he was, of course, furthering the wishes of his great grandmother's brother, thus uniting the two families in what was later to become the Thorner and Hollis School at Litton.

HARVARD UNIVERSITY

In 1958 the writer corresponded with the Secretary of Harvard (David W. Bailey) concerning its association with Thorner and the Hollis family. In his reply he wrote, 'Thomas Hollis [he was referring to the Thomas of the last paragraph] is indeed a familiar name at Harvard . . . from where I sit it is but a step to Hollis Hall, a dormitory named after him and the earlier members of that family who were great benefactors.

The name Thorner is less familiar today but he occupies an honoured place in the Harvard Archives. He was a wealthy dissenter who had known Nathaniel, brother of Increase Mather the rector of this University from 1685-1701. He had also met Increase when he spent four years in England from 1685 soliciting gifts for the university. Long before this, however, he had decided to leave a legacy to Harvard, writing to Nathaniel:



Plate 2. The School viewed from the south in 1984. The modern buildings (1968) are in front of the 1878 schoolroom. The master's house (1774) was built like a typical large farmhouse of the period with two ground floor rooms, two first floor bedrooms and two attic bedrooms. Originally there were no windows on the south side.

'Deare Sir, I shall not forgett the nursery of lerning and piety, upon which God, I hope, haue set by harte for many yeares past . . .'

As we have seen he made a generous bequest of £500 but this was not fully paid up until the leases on the London property expired in 1775.

THE THORNER CHARITY IN LITTON CHENEY

The School

In the Thorner will (1690) the main benefactions to Litton follow a complicated direction to the executors detailing how they should use the profits from the London property for certain family bequests:

'item . . . then I appoint twenty pounds per annum of the remaining neat rents proceeds issues and profits towards the maintenance of a free school in the parish of Litton in the county of Dorset to teach the male children of the said parish to read write cast accounts and grammar from the age of six years to fifteen. The schoolmaster to be appointed by my Trustees'.

The Apprenticing Charity

'And the remainder of the profits of the said lands the foregoing legacies mentioned being first allowed I give to the binding out apprentices to mechanical labouring trades such poor children and youth as are of pious and sober persons of the said parish of Litton the town of Dorchester town of Southampton and the city of Sarum to every child five pounds for placing out apprentice and five pounds more for a stock to set up with at the end of the apprenticeship which I will give only to persons of the said places who are sober and industriously inclined in the opinion of my Trustees'.

This latter bequest is outside the purpose of this paper but it is worth mentioning that, like the school, it has been serving the children of the parish for three hundred years.

The First Hundred Years

The relatively few records of the early days of the school are found in the Thorner Charity documents deposited in the Southampton Record Office, in particular the 'London' Account Books 1690-1844.

The first indication of the school being in operation is 'by one year's salary to Thos Dawes, Schoolmaster 24 July 1695'. There is no indication as to the site of the school but we do know that it was not on the present site (see below). The accepted and necessary custom of children working from a very young age must have limited numbers. By comparison with comparable Dorset village schools at the beginning of the 1800s we might hazard a guess that the attendance at Litton was not more than around twenty during the 1700s.

The length of service of the first masters is remarkable. Thomas Dawes died in January 1746 having been in the post 51 years. John Hurd who was appointed in his place ran the school for another 31 years. In 1778 he was followed by the Robert Cox mentioned below but he had to forego part of his £20 salary 'allowing £5 per annum to the later schoolmaster John Hurd, he being incapacitated through age and infirmity'. The next appointment was that of the Rev. Mr. Kirkup of South Petherton in 1781 who had to contribute to John Hurd's pension for another two years. No doubt the Trustees were reluctant to appoint an Anglican but had to accept the situation, the problem having already arisen in the Hollis School at Rotherham.

Mercer, quoting from the Hollis Papers, thus noted the occasion in 1779 when the trustees of the Rotherham school were finding difficulty in appointing a practising Dissenter. The Sheffield Trustees could only find John Morton, an Anglican, to fill the post. The matter was referred to Timothy Hollis who went at length to explain his feelings on the matter:

'This trust was undoubtedly founded for the support of the Dissenting Interest. This man is not a Dissenter and how far it is consistent with our principles to oblige a man to go to a Meeting counter to his judgement I do not see any more than obliging a Dissenter to conform for a place or post say as Exciseman or other office. A similar situation had arisen in Dorset but as there was not a Dissenting Meeting nearer than Bridport, Dorchester and Sherborne, 8, 10, and 12 miles, a churchman was appointed. It is different in Rotherham so that if a Dissenter of good character can be found it will be much more desirable.'

Timothy is, of course, referring to Thorner's School at Litton where the problem must have arisen when Robert Cox was appointed the year before. Thus three years later, as we have seen, an Anglican in Holy Orders was chosen to fill the vacancy

following Cox's resignation.

Timothy's pronouncement is vital to the conclusion reached in this paper that in the 1700s and well into the next century Thorner's School at Litton was controlled by a strong dissenting interest. It must be stated, however, that there is no evidence of conflict with the established church at Litton during the school's early days, that, as we shall see, was to come later. Indeed Robert Thorner's obviously close friendship with the parson at Litton and the later appointment of masters for their qualities as teachers rather than for their religious inclinations suggest a considerable degree of tolerance.

The Schoolmaster's House

Timothy Hollis must surely have been well acquainted with Litton. His cousin Thomas had bought his farm at Corscombe with the manors of Halstock and Netherstock as far back as 1741 but did not retire there until 1770. He too was a trustee of the Thorner Charity in Litton and it seems likely that the two cousins often discussed the problems of the school. Certainly together they took considerable steps to further its efficiency.

Thus 'in 1770, Henry Legg, occupying an estate called Hodder's Farm, held by lease of Rev. John Richards, conveyed to Thomas Hollis 2½ acres to the use and benefit of the Charity School in Litton' (Thorner Papers).

The report of the Charity Commissioners in 1839 (Hants Vol.) noted:

'In 1776 Timothy Hollis, one of the then Trustees, by indenture enrolled in Chancery conveyed to Thomas Brand Hollis and two others, his co-trustees, a close called Hill Close, containing by estimation 2½ acres at Litton in Dorsetshire, previously purchased by a former Thomas Hollis, then deceased, at his own expense, together with a house for the habitation of the schoolmaster then built thereon by the said Thomas Hollis and Timothy Hollis at their joint expense . . . for the use of the trustees, on trust, to permit the house and such part of the close as has been divided off for making a garden or yard thereto, to be occupied rent-free by the master of the free school at Litton, with the power of the trustees to remove him from his residence, and to lease the remainder of the close and apply the rents for the repair of the house, it being the intention of the said Timothy Hollis that the management of the said premises should always be under the care of the trustees of Robert Thorner'.

It seems clear from the above that when the house was built the schoolroom was elsewhere in the village. However, in 1834 it was noted (Dorset Vol.) 'that the school premises consist of a spacious schoolhouse with a large schoolroom with every convenience but now in a bad condition'. A schoolroom therefore must have been added to the house, probably soon after it was built. However, no record of the move from the first school has been found. An entry in the account book shows '1825 by repairs for thatching Litton old schoolhouse, but this could not have been the house in Hill Close which had a slate roof. (It is known that William Hawkins, landlord of The White Horse at Litton, was in 1841 living in Old School House, probably as a tenant of the trustees after they had built the school in Hill Close.)

Some confusion arises between 'The School House' and the 'Schoolhouse'. Usually, but not always, the former refers to the master's residence, the latter to the school itself. The surveyors of the first O.S. map (c. 1805) identified the building in Hill Close as 'Schoolhouse'. Since it was not then their practice to name individual houses, not even large country mansions, they are obviously noting the school itself. On their later large-scale maps only the 'school' is identified but the road leading to it is 'School House Lane'.

We learn a great deal about the building of the master's house from a document among the Thorner Papers. It lists some eighty items of expenditure covering three years from 1771.

In March of that year work was begun showing payment for the digging of foundations and bringing oak timbers from Nash in the Marshwood Vale. In November however, work suddenly stopped and did not start again for fourteen months. A cryptic single entry for 1772 shows that in September of that year payment was made 'for a messenger to Litton about ye land (twice)'. Obviously some flaw had been found in the conveyance and work only began again in April of the following year.

It then proceeded apace and by July 'a customary allowance to the workmen in setting up ye beams - 3s' was noted. On September 3rd there was payment 'at setting up ye principal rafters and laying ye foundations of ye Necessary House'. By the end of the month roofing was underway. An entry suggests that the slate was brought to West Bay by ship there being an entry 'paid to labourers

at Bridport for assisting in unloading the slate'. It is interesting to note payment for loads of stone coming from quarries at Portisham, Long Burton and Ham Hill.

By February 1774 the house was finished but alas Thomas Hollis did not live to see it, at least not in its completed state – he died suddenly on January 1st of that year. The account shows that final payments were made in settlement on July 21st:

Thomas Hollis Esqr. dec. his half	£222.7s
Timothy Hollis his half paid to	
Thomas Brand Hollis, Executor of the above Tho. Hollis, dec. his half	£222.7s

An entry in (1775) in the Charity account book shows that £425 was paid out of the account 'to school at Litton Cheney'. It seems therefore that Timothy thereby repaid himself and the estate of his cousin for their outlay in building the house.

THE SCHOOL 1800-1877

With the death of Timothy in 1791, at the age of 81, the efforts of the Trustees were directed towards the almshouses in Southampton and their interest in the school at Litton began to decline. In 1778 the accumulated rents from the London property had enabled them to purchase a site in Southampton and erect almshouses as instructed by the Thorner will. The funds of the Trust continued to grow so that by 1883 they had provided forty-three widows with houses and pensions of five shillings a week. These and the continued support for the apprenticing charities was then noted but there was no reference whatever to the school at Litton (Silvester Davies 1883, 308).

The Rev. Kirkup, appointed by Timothy way back in 1781, continued as master until 1823 when he was replaced for a year by another cleric, the Rev. R. Seward. The next appointment proved to be most unfortunate.

In 1839 the Report of the Charity Commissioners noted that Charles Herbert, appointed in 1823 'had a good school for about twelve months after which he began to exert himself in the dissemination of Unitarian principles in a manner so offensive that the parents refused to send their children and for many years before his death (8-9) he had no scholars at all. Not being called upon by the Trustees, he totally neglected the buildings.'

To add insult to injury he had for the whole time broken up the land behind the house (which was intended to be let and the rent used to keep the house in repair) and used it as a garden for

himself. During all this time the Trustees appear to have ignored the situation although, as we have seen, they had powers of eviction.

Not till 1834, when a new master, Henry Morgan, was appointed and the house was repaired did the Trustees visit Litton. They found that it would be desirable to build a new school room which would cost £60-70 but made no offer to pay for it from the main account. The Charity Commissioners noting that 'there is no fund for which this sum might be derived except that which is directed to be appointed to the apprenticing charity. We think the balance of £5 in favour of Litton in that charity account may, without impropriety, be used for this purpose'.

In 1835 an item in the Charity account book records that Thomas Fisher was paid £64 for building a new schoolroom. This must have been the building referred to by The Schools' Inquiry Commission in 1869. A summary of that report, published in a local newspaper appears elsewhere, (Bailey 1952, 57). The schoolroom was described as being 27 ft long, 18 ft wide and 10 ft high, the windows and fireplace being the only means of ventilation.

The building of the new schoolroom must have made inroads into the Trustees' fund. In 1838 we find the first recorded contact between them and the parish of Litton. In February the Rector, the Rev. J. S. Cox, received a letter suggesting that the inhabitants of Litton should contribute towards the salary of the schoolmaster and that there should be a meeting to discuss the matter. How the Rector reacted we do not know but it prompted a curt reply – 'the Trustees cannot allow the parishioners to prescribe the terms upon which they will send their children to Litton school'. It seems that there had been a desire on the part of the Trustees to increase the master's salary out of the charity funds but this had been refused by the Master of the Rolls. However, after consultation with the Charity Commissioners, agreement was reached whereby the parents should make some small payment towards the education of their children. Accordingly the Trustees directed Mr. Morgan, the master, to receive 3 shillings a quarter for the instruction of each child not being the child of a common labourer.

Henry Morgan was described as a worthy old man, old-fashioned in his notions of teaching who had occupied the post for thirty years. However, he died in 1870 as much loved as his predecessor was hated. He is buried in Litton churchyard his stone inscribed simply 'Henry Morgan, Schoolmaster'. He was followed by a Mr. Beale who would be the last to be appointed under the original Thorner foundation for a fundamental change was about to take place.



Plate 3. The north elevation of the house in 1970. The old schoolroom is on the right. All the windows still have their Ham Hill stone mullions but only two sections of the original leaded lights have survived.

THE THORNER AND HOLLIS SCHOOL 1877-1902

The Elementary Education act of 1870 required boards to be set up to establish schools in places where none existed and to bring the already established endowed schools up to standard. The Trustees of Thorner's School thus became under pressure to replace the school, which they had built only forty years before, with one providing eighty places. With the use of their available funds concentrated, as we have already seen, on the almshouses in Southampton they could not, or perhaps would not, undertake the funding of a new building.

They, however, and the local church representing the parish of Litton, were anxious to avoid the setting up of a Board School and together they promoted a Scheme for the governing and conduct of a new school which would be built to meet the requirements of the Act. In so doing they could ensure that there would be some emphasis on religious teaching albeit non-denominational.

The Scheme was passed in 1876 providing that:

1. The school was to be known as the Thorner and Hollis school.
2. Two governors were to be appointed for six years by the Thorner Charity.
Two by the vestry of Litton Cheney representing both parish and church interests.
Two for one year by the subscribers to the school.
3. The governors were not to be excluded because of religious opinions or attendance or non-attendance at any particular place of worship.
4. Masters were not required to be in Holy Orders.
5. Religious instruction was to be in accordance with the principles of the Christian Faith.
6. No scholar should be deprived of any advantage or emolument in the school on religious grounds.

A subscribers' fund was set up which had reached over £200 by the inaugural meeting on May 4th 1877. The projected cost of the Scheme being £400 it was decided to approach the Charity Commissioners for a loan of £200 to make up the sum required.

The Governors appointed under the Scheme present at the meeting were:

For the Charity	Thos. Colfox and Joseph Stevens
For the Parish	Dr. Colby (Rector) and Thos. Fry
For the subscribers	L. Cox and J. Saunders

It is at once obvious that the London Trustees must have consulted the strong non-conformist element in Bridport before nominating their representatives since Thomas Colfox was one of a family long connected with the strong dissenting movement in the town and which had been concerned in the building of the Unitarian Chapel in 1794.

The early minutes of the Governors' Meetings record how the Scheme was brought into effect:

- 1877, June 23 Plans for the new school approved.
 Aug 1 Tenders accepted for repair of the house.
 Sept 24 Estimates for building school received.
 Request to Charity Commissioner for an additional £100 loan.
 Oct 29 Tender for school accepted – to be completed in four months.
 Nov 29 Plan discovered to be '8 ft too short' and the estimate revised.

The plan is in the Dorset County Record Office. The school was actually built with the position of the classrooms reversed.

By February 1878 the Governors were in a position to advertise for a married master at a salary of £70 p.a. with £10 to the wife 'for the sewing'. Religious instruction was to be in accordance with the laws of the Board schools (i.e. non-denominational). On March 3rd a Mr. Garland accepted the post, the school to start on Lady Day.

For the rest of the century the school continued along the lines of an ever expanding educational system. For our purpose, however, we should take note of certain developments in the matter of religious teaching. In February 1887 it was resolved by the Governors that the Diocesan Inspector should be allowed to examine the religious knowledge taught in the school provided that the course of instruction be modified by the omission of the Church of England catechism.

Inspectors' reports in 1889 and 1891 deplored the omission but the Governors would not relax their decision. However, permitting the entry of the Diocesan Inspector infers that the Church Syllabus was being used and as the years went by Salisbury Diocesan Authority came to bracket Litton with their Church schools.

In 1887 a letter was received from the Bishop of Salisbury asking the Governors to join a Diocesan Voluntary Schools Association in the area. The reply was curt and definite:

'that in no circumstances would the Governors of the Thorner and Hollis School join an ecclesiastical area'.

The minute book ends in 1903 when the school came under the newly formed Local Education Authority.

THE SCHOOL 1902-1947**Educational Changes**

By the end of the nineteenth century advances in education had resulted in a confusion of controlling authorities which led to major reforms. In 1899 the Board of Education Act created a new central authority and in 1902 the Education Act brought all elementary schools under the control of local authorities. 'Voluntary' schools, such as Thorner's, with managers appointed under a trust deed, now came under the direct control of the Local Education Authority, a committee of the County Council. Thenceforth payment of teachers and funds for running the schools came from the public purse. Schoolmasters' houses were not included nor was the maintenance of school buildings as such.

From 1903 the managers were, in the case of 'non-provided' schools, appointed jointly by the authority and the founding body. The overwhelming majority of such schools were regarded as 'church' schools by trust deed or custom. In fact by 1926 out of Dorset's 253 schools 213 were non-provided (later to be known as 'voluntary'), 213 were Church of England, 4 were Catholic and there was 1 Non-conformist. (*Dorset Education Committee Handbook, 1926*)

The School under the 1902 Education Act

From 1903 it is clear that the LEA, although well aware of the Thorner Charity (but not the nonconformist interest underlying its foundation), regarded it as a church school. This situation no doubt arose during the later years of the 19th century as a result of the declining interest by the Thorner Trustees and a compensating interest by the village church, the Rector, by custom, being chairman of the governors. After 1903 these became 'managers' and the two hitherto appointed by the subscribers were appointed by the LEA. By now the church was taking over the appointment of the four 'foundation' managers. While the new system, with its relief from their largest expense, (the payment of teachers) must have been greeted with relief by the managers, other problems remained. The house, hitherto an integral part of the charity, was now entirely divorced from the school and maintained by the rent paid by the master.

There was also concern as to the future of the charity payment which hitherto had been used towards the master's salary; this was now paid by the local authority. In 1903 the managers resolved that it should go to the relief of Litton's rates but that the rent of the field should be reserved by them towards the upkeep of the school building. The following year they amended this to £5 only for the rates, the rest to be used for maintenance. In 1906, however, the problem was solved by the LEA which, now having the power to do so, appropriated the income from the charity. The argument was, of course, that the money was still being used for its original purpose, albeit indirectly. This state of affairs continued until 1929 (see below).

The years of the first quarter of the 20th century, even with the intervening war, were for the school a relatively stable period. Generally, it was a two-teacher school with a master and mistress, the latter being necessary because since 1876 the school had taken in girls. It should be noted that during this period it was known as 'Thorner's Charity, Litton Cheney'. Numbers which had been around 70 at the beginning of the century dropped drastically in the war years to around 30. In the matter of religious instruction, the objection to the catechism was a thing of the past. Now the Rector took an interest in, and indeed once a week taught, in the school which was now examined in these matters by the Diocesan Inspector.

The Central School

Through the later 1920s housewifery for the girls and gardening and woodwork for the boys was introduced into the larger schools, these being specially equipped with extra facilities and specially qualified teachers. Gradually the older children from the smaller schools were regularly transported to these centres. Thorner's, although small itself, became one such school, mainly because of the availability of its field for a garden. It served all five villages at the eastern end of the Bride Valley. To make classroom space for the extra children the junior children (i.e. 7-11) were conveyed to Puncknowle school, the same transport returning to Litton with senior children. These latter were taught by the specialist teachers;

Litton's infants (5-7) had their own teacher in the small room.

This necessarily put a strain on the managers' limited income although most of the cost of adaptation was borne by the LEA. Use of the field as a garden presented no problems but part of the house had to be given over to cookery and woodwork rooms. To do this the accommodation in the house had to be rearranged and the managers requested that they be allowed to keep £15 of the charity money each year towards the extra expense incurred. A later application for the retention of the whole amount was successful, the amount being paid direct to the managers, as indeed it is today. The central school continued through the difficult years of the second world war until the upheaval in education which followed it.

THE SCHOOL 1947-1968

The far-reaching Education Act of 1944 was to bring many changes. Primary and secondary schools were now clearly defined. The old non-provided schools, which, as we have seen, were virtually all 'church', found it necessary to receive outside help if they were to bring their buildings up-to-date. Thus there arose two kinds of 'church' school:

1. 'Aided' whereby the local Diocesan Education Authority took over the maintenance of the buildings. In these the clergy still had the right to enter the school and the church still appointed four of the six managers.
2. 'Controlled' whereby the County Education Authority took over the upkeep but the clergy no longer had right of entry and the church no longer appointed a majority of managers.

In 1948 the managers of the school appealed unsuccessfully to the Trustees of the Thorner Charity to help raise the school to the required standard. They also considered the possibility of becoming an aided church school on the grounds that the 1876 Scheme had required religious instruction to be given 'according to the principles of the Christian Faith'. They were further encouraged in this by the fact that in 1948 the Diocesan Education Committee had included Litton in a paper on the future of its church schools.

In March 1949, they sought the permission of the Charity Commissioners to change the status of the school to that of 'aided Church of England'. The outcome was unfavourable both to the managers and to Salisbury. Bishop Lovell wrote, in a personal letter to Canon Daniell:

'I am sorry that your application has been turned down by the Charity Commissioners. Controlled seems to be the only answer. I

observe it is becoming very general in the Diocese.'

That would seem to have settled the matter but among the managers' minutes and papers there is no further mention of what must have been a continuing effort by both sides to obtain consent for a change in the school's status. The LEA was, of course not directly involved in the matter. However, eventually the County Education Officer informed the managers that the school had become 'voluntary aided' under a Scheme 51/1694P, having been included in an order with two other schools. The confused state of the matter is obvious from a second letter which immediately followed the first – 'I am sorry I was mistaken in suggesting that The Thorner Charity had been consolidated with a number of educational charities in a recent scheme made by the Minister. It is, of course, independent' (managers' correspondence).

In spite of all the above, by 1952 Thorners Charity School had, somewhat mysteriously, become Litton Cheney Voluntary Aided Church of England School; to this the writer was appointed in 1953, (note that the name of Thorner was now dropped from the title).

In 1956 the managers approached Salisbury with a request for new lavatories and a cloakroom. When discussing the proposal with the Diocesan Education Officer the writer queried whether in so doing Salisbury would be building on land which they certainly did not own. He was, however, ignored and the building went ahead.

Four years later the managers were again finding it difficult to meet their responsibilities and again they wrote to the Trustees this time receiving a categorical reply from their chairman refusing to help on the grounds that the primary duty of the Trustees under the Charity Commissioners' Scheme was to maintain the widows' homes in Southampton. The managers then considered becoming controlled but were dissuaded by Salisbury who, to help, reduced their contribution to the Diocesan Maintenance Scheme.

In May 1962 a representative of the Diocesan Authority again discussed with the writer the school's future, this time in view of the closure of the neighbouring school at Long Bredy which would necessitate reorganisation and expansion at Litton. Again the question of the ownership of the land was raised, the writer pointing out that the Thorner Trustees in London (then a firm of solicitors) alone had the responsibility for the land involved. This time the matter was taken up and neatly solved in the following manner.

In 1965 Salisbury asked whether the Governors would consider applying to the Department of Education for a change in



Plate 4. The school from the air in 1990.

trusteeship investing the Trust in the Salisbury Diocesan Council of Education.

The managers readily agreed that 'the trusteeship of the Thorner Charity School at Litton Cheney (note the use of the original title), comprising school buildings, a school house and 2½ acres of land to be transferred to the Salisbury Diocesan Council of Education provided that the managers should continue to receive at least £25 p.a. from the Thorner Charity'.

Within a few months a Scheme was drawn up, advertised and passed by the Department of the Environment.

Scheme 5059P 30.11.65 . . . 'the foundation of the Thorner and Hollis School at Litton Cheney, Dorset shall be administered by the Salisbury Diocesan Council as the governing body'.

Thus Thorner's Charity School became Thorner's Litton Cheney Church of England (voluntary aided) – the new title summing up the metamorphosis which was now complete.

THE 1968 EXPANSION

The advantages of the new situation were soon obvious. Salisbury, an authority with the power to obtain an 80% grant from the Department enabled the reorganisation to go ahead. In November 1967 the building of two new classrooms, a dining room/hall and canteen kitchen (the latter provided by the LEA) was begun and opened officially on October 11th 1968. The £20,000 cost was shared 80% by the Department, 10% by the Diocese and 10% by the churches of the five villages which would use the school.

The following year the LEA converted Hill Close into a playing field and the School Parents' Association provided a heated swimming pool. The school thereby became an establishment which could hold its head high among its peers.

CONCLUSION

We have traced the story of the school over the last three hundred years. In spite of the many changes brought about by an evolving education system, it still continues today to implement the simple basic elements as defined by the founder at the end of the 17th century and still regards the moral and religious teaching which inspired him to be of fundamental importance.

It is to be regretted that more details could not be found of the man himself. However, he stands out clearly as one

with deep personal conviction in religious matters yet tolerant and respectful of the feelings of others as well as being far-seeing in the value of educating the young.

As a tribute to him, the new school buildings were, in 1968, officially opened by Reuben A. Brewer, Professor of English Literature and Master of Adam's House at Harvard University, USA, a foundation which Robert Thorner himself had once described as 'that nursery of learning and piety upon which I have set my heart'.

Happily the school at Litton, in spite of many attempts to drop it, still carries the founder's name in its title.

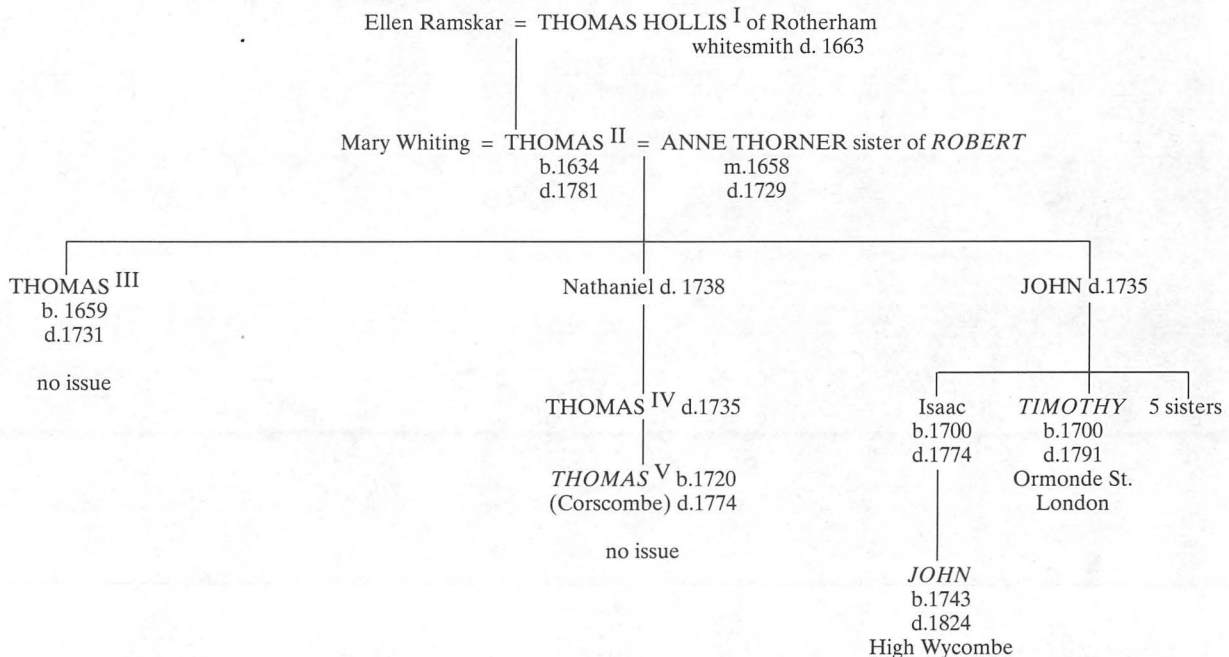
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THE HOLLIS FAMILY (after Mercer)

All those shown in capitals, with the exception of Hollis I, contributed to the Hollis Trust founded by Thomas II in Sheffield and Rotherham. Those underlined are known to have been involved with the Thorner Trust as it concerned the school at Litton. Thomas V bequeathed his wealth to a friend Thomas Brand of Hyde in Essex who assumed the name and arms of Hollis. From the report of the Charity Commissioners for Dorset it is clear that he then became one of the Thorner trustees.

Barracks in Dorset during the French Revolutionary and Napoleonic Wars

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Thomas Hardy's readers are familiar with the great military preparations made along the coast of Wessex against Napoleon's threatened invasion of 1803-5. This was, however, not the first threatened invasion of Great Britain during this era, but the last of a long series. Wars with France throughout the eighteenth century had involved similar threats – especially in 1779, when the French and Spanish fleets briefly controlled the English Channel. The wars at the end of the century against the French Revolution and Napoleon simply involved preparations on a much greater scale than ever before. The old practices for garrisoning the island could no longer bear the strain of these numbers, and, beginning in 1793, the government built, purchased, or rented more than 200 new barracks, seven of them in Dorset, including the largest single cavalry barracks in Great Britain. At their greatest extent, the Dorset barracks were capable of accommodating more than 6,000 men.

Dorset had long been accustomed to the presence of the military; regiments assigned to assist the Customs officers had frequently been stationed in its coastal towns and villages, with headquarters usually at Dorchester (Houlding, 1981, ch. 1). In 1791, for example, there were dispersed detachments of the 1st Dragoon Guards at Weymouth, Bridport, Blandford, Sherborne, Poole, Lymington, and Ringwood (PRO, WO65/67, 473). The troops were quartered on the inns and public houses, since providing barracks for them would fly in the face of the old eighteenth-century English prejudice against a permanent home for the standing army (Schwoerer, 1974). Although British regiments in Scotland, Ireland, and colonies overseas were provided with barracks accommodation, it was a constitutional maxim that troops in England should live "among the people". In practice, this limited the provision of barracks to the old royal castles and fortresses and to embarkation ports like Portsmouth, Plymouth, and Chatham. Any more troops than these could hold, or troops posted to different locations, had to be billeted in the inns and public houses, or encamped in tents.

The billeting system was a remarkable (and little-studied) responsibility of local government. By the terms of the Mutiny Act, the keepers of inns, public houses, ale, wine, and coffee houses, and livery stables were obliged to feed and house foot soldiers at the rate of 4d. per day, cavalry troopers at 6d., and their horses also at 6d. These rates had been set in the 1690s, and not altered since; they were frequently a subject of complaint when provision prices were high. In charge of the system were Justices of the Peace and parish constables in the countryside; and mayors, town corporations, and their appointed billet masters in the towns. Constables or billet masters issued paper billets to arriving soldiers, apportioning them to the various public houses; they also were responsible by law for assuring that all legally required items were provided. Justices and mayors, meanwhile, tried to mediate in the inevitable disputes that arose between the local publicans and the visiting soldiers (Clode, 1869, vol. 1, ch. 9). The system necessarily caused regiments to be dispersed over several towns, and even troops and companies over several inns and public houses within a single town. Lord Herbert, looking for winter quarters for the 2nd Dragoon Guards in 1792, reported that two troops of his six were as many as "the People of Dorchester conceive to be their full quota, & have, I understand, received strong assurances, that no greater number will ever be quartered there." The rest were scattered in five other towns in Dorset and Wiltshire. He looked instead to Salisbury or Winchester for quarters in which to collect and train his regiment (PRO, WO1/1052, 523-25).

Wartime mobilization, which required much larger concentrations, especially along the coasts, always overloaded the

billeting system. The army then turned to tented camps to accommodate and train the country's defenders. In eighteenth-century wars this meant the Militia, who were assigned to home defence while the regular troops were dispatched overseas. The Royal Navy, of course, was meant to be the main bulwark of the country. The militiamen, conscripted for the duration of the war, were to be on hand in case the Navy failed. Although guaranteed by law not to be ordered overseas, the eighteenth-century militiaman was nevertheless not a 'citizen soldier' residing at home. Once chosen by ballot, he was put under military pay and discipline and almost always marched away from his home county. This reduced his temptation to desert and made it possible to train him to the same standard as a regular soldier. The Dorset militia regiment raised in 1792, for example, were immediately ordered to Portsmouth Barracks, and later to duties in Sussex; the Portsmouth garrison, and finally (after they volunteered for this service) Ireland. Militiamen and regulars assembling to defend the coasts were concentrated in large tented camps. In 1779, the southwest had been guarded by a camp near Salisbury of nearly 5,000 militiamen and dragoons (Patterson, 1960, 124). These camps were necessarily a summertime phenomenon, however; when Autumn weather diminished the danger of invasion and made the tents unhealthy, the troops were ordered to march to the interior of the country and disperse into winter quarters in the public houses of the inland towns.

The drive to build barracks in the 1790s had a number of sources. One was the revolutionary sentiment that had provoked mutinies and disobedience in the French army (Scott, 1978). Fears about the army's reliability sparked barracks construction even before war was declared. Early in 1792, the Secretary at War commissioned Colonel Oliver DeLancey, Deputy Adjutant General of the army, to travel incognito to several northern towns to investigate and report on the discipline of the cavalry regiments quartered in them. Cavalry troops, in particular, were relied upon to suppress civil disorder, and cavalry detachments had recently been increased in the industrial towns. DeLancey reported that most units were sound, but some were not, and the loyalty of all of them was being undermined by the soldiers' contact with civilians. These contacts, DeLancey reported, were an inevitable consequence of their quarters in urban public houses (Emsley, 1975). In July 1792 the Secretary at War gave DeLancey orders to purchase or erect cavalry barracks in Norwich, Birmingham, Coventry, Manchester, Nottingham, and Sheffield.

These six barracks were still under construction, when war broke out with revolutionary France. In November 1792 the English Militia was embodied, and hostilities were actually declared in February 1793. By the summer of 1793, nearly 50,000 militiamen had been balloted and formed up in their home counties and were ready for encampment along the coasts. Meanwhile, as recruiting for rank drew ambitious would-be officers to raise companies and troops for regular army service, militia strength was set at 52,000, and Parliament authorized the raising of 40,000 fencible cavalrymen for home defence (Ehrman, 1983, 329). Even as expeditions of regular soldiers were dispatched to the Low Countries and West Indies, forces at home grew rapidly towards 60,000 men and 10,000 horses. Weymouth was a frequently used campsite for these hosts during the 1790s. The Weymouth Camp in 1796 included the 1st, 3rd, 15th and 16th Dragoons, the Lancashire Fencible Cavalry, and the Staffordshire Militia Regiment (PRO, WO17/2782).

The size of this mobilization, the unpredictability of the revolutionary enemy, and the price of provisions all operated to disrupt these traditional means of garrisoning the country. In

comparison with the forces of Louis XVI, Robespierre's army was considerably larger, especially after the *levée en masse* April 1793. British military leaders worried that this revolutionary army was capable of anything, including an unconventional wintertime descent upon the English coast. The coastal garrisons were accordingly strengthened, and fewer units marched off into the interior for the winter. Instead, they were billeted in coastal districts. The winter of 1793-94 also saw high prices for food, fuel, and forage. All of this was too much for the innkeepers in coastal towns to bear – especially when it was well known that other towns were about to enjoy barracks provided by the government. Publicans in more than twenty towns petitioned the government, complaining of the burden of billeting soldiers and horses, and requesting barracks be built in their neighbourhood. These petitions, which often had the support of the local inhabitants and elites, were dispatched to county Members, to the War Office, the Treasury, and the Ordnance. This means that they are not now all in one place. None of the twenty-one petitions I have located is from Dorset, but it is possible that one exists in local records. In any case, the petitions show that the public's long-standing prejudice against barracks had begun to break.

Meanwhile, innkeepers in some coastal towns in Sussex and Kent began to go further, tearing down their signs at the approach of marching regiments. This meant losing their licenses, but in many cases all the publicans of a town 'struck' together in hopes that the local magistrates would relent and allow the public houses to reopen once the plague of soldiers had moved elsewhere. Faced by repeated crises, the War Office authorized commanding officers in 'the Maritime Counties' to hire 'Barns, or other Covering, that may be got on moderate Terms' for their men (PRO, WO4/159, 229-31; WO4/774, 17-19). This economy, however, caused other problems. Some of the 'coverings' hired for the militiamen were not very comfortable, and troops in such 'barracks' were moreover not entitled to the same beer ration as those in quarters. The Duke of Richmond, commanding the troops defending Sussex, wrote to the Prime Minister in October 1793 of "pretty general discontent" among his eight militia regiments about to break camp. Both officers and men were grumbling about their winter quarters, and at night the men were shouting from tent to tent their slogan 'No Barns no pigstyes, small beer and good Quarters'. (Kent RO, S5 U1590, 03/14). This was just the sort of military unrest that the ministers had feared the year before among the cavalymen, and their response was just the same. Adequate barracks (with a beer allowance) were ordered to be fitted up with all due haste, by both the Ordnance Board and Colonel DeLancey.

Approbation for this barracks building was in fact something less than general: Charles James Fox and several of his following in the House of Commons complained about DeLancey's first barracks-building campaign as unconstitutional. A motion to this effect was debated in the House of Commons in February 1793 (PR, 2nd ser., vol. 34, 560-87). A pamphlet by David Erskine restated all the old seventeenth-century arguments about the standing army and applied them to the new barracks, calling on Englishmen to petition against "this daring attempt on your Liberties". (Albanicus, 1793, 62-3). No such anti-barracks petitions were recorded, however, and government agents were soon busy during 1794 hiring buildings to be fitted up as temporary barracks, and purchasing or leasing ground for more permanent ones. These tasks had always been the province of the Ordnance Board, but that department had been slow in providing temporary barracks in Kent and Sussex, and DeLancey's more streamlined operation was preferred. In July, the new Secretary at War, William Windham, established DeLancey as Barracks Master General, in charge of a new Barracks Department, and royal warrants took all responsibility for army barracks away from the Ordnance and placed it in his hands. In a typical bureaucratic compromise, however, barracks for the Royal Artillery remained in the hands of the Ordnance (CME, 1st Report, 35-42).

DeLancey, a cavalryman, was most eager to increase the barracks accommodation for that arm of the service. Before the six cavalry barracks were begun in 1792, there had only been two small cavalry barracks in all of Britain: near Kensington Palace

and in the Tudor stables at Hampton Court. Together they held only 200 men and horses (BL Add. MS. 37,891, f. 115). Late in 1793 DeLancey proposed what can only be termed an extensive network of twenty-nine small cavalry barracks all around the English coast: Barnstaple, Modbury, Totnes, and Exeter in Devon; Bridport, Dorchester, Weymouth, and Wareham in Dorset; Christchurch and Southampton in Hampshire; and so on all the way around to Lincolnshire. Most of these barracks were planned to hold only one troop of cavalry, about sixty men and horses. Periodically along the chain there were to be larger regimental headquarters barracks holding three or four troops. In the south these were to be at Exeter, Dorchester, Brighton, and Canterbury (*Ibid.*, ff. 11-12). The King's practice of sea-bathing at Weymouth does not seem to have influenced these locations; Dorchester, with accommodation for two troops of horse clearly had the priority over the Weymouth Barracks of half its size. All of the new barracks were to be built of brick or stone for permanent use.

The rationale for so dispersing the cavalry is something of a mystery. One of the principal advantages of barracks was supposed to be the concentration they would afford, as opposed to the dispersion of men billeted in the inns and public houses. Keeping the whole regiment, or at least two-troop squadrons, together was vital for training them in battle-field manoeuvres, as well as for the overall discipline of the men (Houlding, 1981, 94-95). The twenty-one small, one-troop cavalry barracks projected by DeLancey would be too small for adequate training; their complement of only four officers was even inadequate to form regimental court-martials. DeLancey provided no written rationale (or, if he did, it has disappeared with the rest of the official records of the Barracks Department), but the explanation probably lies in smuggling. Before the war DeLancey had been partially responsible for assigning cavalry regiments to disperse for their traditional coast duty in aid of the revenue officers. A War Office plan of 1784 for using cavalry regiments to reduce smuggling in fact specified Dorchester (with three troops) and Bridport, Weymouth, and Wareham (with one each) as the Dorset garrison. So DeLancey's planned string of small coastal stations seems to be addressed to the peacetime tasks of the cavalry.

These were soon replaced by wartime concerns as DeLancey assumed his new responsibilities later in 1794. By July, ground had been purchased at Wareham, Weymouth, and Bridport, and leased at Dorchester, and construction had begun (BL Add. MS 37,891, ff. 11-12). East of Southampton, however, the planned network was abandoned. Infantry barracks for the militia was what was required, and the need was immediate. In Poole and Weymouth, DeLancey hired buildings to be fitted up quickly for large numbers of infantrymen. At Weymouth, he hired a malt house, a storeroom, and other premises to house 210 men of the Buckinghamshire Militia. At Poole, in December 1794 and January 1795 he created a huge makeshift military station, hiring no fewer than sixteen warehouses and other premises to accommodate 5,110 men, together with another ten buildings to serve as guard houses; cook houses; storehouses for beer, straw, and baggage; and a hospital. According to the *Exeter Flying Post*, this was the greater part of the storehouses in town (16 December 1794). He consolidated these when the leases ran out the following March, retaining eleven buildings holding 4,693 soldiers, and another five service buildings. Poole rapidly filled up with regular infantry regiments marching there for shipment overseas on Henry Dundas' disastrous expeditions to the West Indies, as well as militia regiments in training. By March 1795 no fewer than five regular regiments – the 90th (2nd battalion), 95th, 98th, 108th, and 129th Foot – passed through Poole. (PRO, WO5/70, 492-93). In January 1796 five regiments were in winter quarters there: the 78th and 98th Foot and the South Devon, South Gloucester, and Anglesea militia regiments. The North Gloucesters were at Weymouth (PRO, WO17/2782).

Meanwhile, the four cavalry barracks were still under construction at Bridport, Weymouth, Dorchester and Wareham. Their brick walls and slated roofs took some months to complete. Dorchester was finished first and accommodated its first occupants, two troops of the Royals, in June 1795. Wareham and Bridport were completed by the end of the year. For

unknown reasons, Weymouth took longer; it was not in service until the winter of 1796-97. The barracks were all designed by the two architects of the Barracks Department, James Johnson and John Sanders. None of their original plans for the Dorset barracks exist; the Barracks Office made a practice of sending them out to the construction-sites, not expecting them to be returned. None, therefore, were eventually deposited at the Public Record Office, though some may survive in local archives. There is a good later plan of the Dorchester Barracks, however, dating from 1859 (PRO, MPH 621). It stood on the site of the present barracks, on the northwestern side of town between Poundbury Lane and the River Frome. A trapezoidal piece of ground, roughly 300 by 200 yards, was enclosed by a high fence or wall. Inside, a formal, symmetrical arrangement of three buildings faced north across the drill ground. In the centre was an imposing Officers' House containing rooms for a field officer, two captains, four subalterns or staff officers, and two quartermasters. This was flanked by two long, more utilitarian buildings, each of which housed 94 horses in stables below and 84 troopers in ten large barracks rooms above. Each of these rooms, which measured 28 by 16 feet, had a fireplace, a large window (eight by four feet), and ceiling ventilator, and a transomed door to the central corridor of the building. Eight men were assigned to each room, which was to serve them for cooking, eating, dressing, and cleaning as well as sleeping. In addition to the barracks rooms, there were five smaller rooms in each flanking building for use by non-commissioned officers, two to a room except for one single room, presumably for the sergeant major. (H.C., 1847 (169.), vol. 36, 361-2).

The rest of the barracks buildings were arranged along the perimeter fences. On the south side were the two gates to the barracks, as well as the canteen, sheds for storage, and the inevitable guard-house. This contained sleeping rooms for the officer and men of the guard, a large arcaded porch for turning out in wet weather, and prisoners' cells. Along the western fence were located a riding house for indoor cavalry drill, a hospital and mortuary, and an infirmary stable for sick horses. A forge, a magazine, more storage sheds, and a coal yard were located along the eastern fence; to the north were dung-pits, privies, and a back gate leading down to the Frome. There were five wells with pumps. Some time between 1798 and 1800, a temporary addition doubled the capacity of Dorchester Barracks, from three troops (174 men, 188 horses) to six (376 men, 400 horses). Accommodation for officers was also doubled. This was almost certainly accomplished by constructing a second symmetrical barracks square, this time with timber buildings, alongside the first. A similar expansion was undertaken at Exeter Cavalry Barracks (FC, 1797, 23; PRO, WO40/13, WO55/1856, 211).

The Weymouth, Bridport, and Wareham one-troop barracks were built on a standard plan used for all of the small stations in DeLancey's projected network of coastal cavalry stations. John Rowe has published a drawing and description of the one-troop barracks at Barnstaple, and, at the other end of the chain, the barracks at Eastbourne has survived as part of St. Mary's Hospital there (Rowe, 1988). Plans of the much-altered Weymouth Barracks dating from 1830 and 1859 indicate that it, and almost certainly its contemporaries at Wareham and Bridport, were of the same design (PRO, WO55/2700, MPH 633). This involved a fenced enclosure, approximately 100 yards square, with only a single large building facing the drill ground. One end of this building housed the four officers' bedrooms, mess room and kitchen, and servants' rooms; the rest housed sixty-three horses on the ground floor and fifty-eight troopers above. The two parts of the building were, however drawn into a symmetrical elevation. The officers' quarters occupied a pavilion at one end, projected slightly from the plane of the building. This was balanced by an equivalent projecting pavilion at the opposite end. In plan, the buildings have some resemblance to a dumbbell. The second pavilion, however, did not represent a separate function, but housed the same stables and troopers' rooms as the adjoining centre section. Its projection was only for the sake of symmetry. Similarly, doors spaced at regular intervals admitted officers to their mess, troopers to staircases to their rooms, and horses to their stable. Upstairs, the men's rooms were arranged on either side of a central corri-

dor as at Dorchester; they slept eight to a room, probably each in a single bed as opposed to the infantry practice of doubling up. There were separate rooms for non-commissioned officers. The window treatment was uniform throughout, the same for both officers and men and indeed for both men and horses. A tall hipped roof included gables above the two end pavilions; it was crowned by a row of chimney stacks. Inside the attic, the flues from below were arched to provide a high, continuous space, lit by dormer windows, for accommodating extra men if necessary, or the unit's baggage. The other barrack buildings, hospital (6 beds), cook houses, two wells with pumps, storerooms, magazine, forge, coal yard, fire-engine house, granary and forage barns, canteen, and guard-house all stood along the perimeter wall or fence.

Outside the fences, but clearly dependent upon the barracks, grew up settlements of crude huts built by wives and children following the regiments. Although a certain number of women were allowed to live inside the barracks to do the cooking and laundry, others were excluded. These took over huts from the camp followers of the preceding regiments, and carried on a variety of retail businesses – often illicit ones involving gambling and the sale of spirits (Gardyne, 1901, 118). John Surtees, historian of St. Mary's Hospital in Eastbourne, reports that the huts outside the barracks wall there lasted well into the twentieth century and were known locally (and anachronistically) as the 'married quarters'. Captain Francis Grose sketched a number of them in an album of barracks views now at the Hastings Museum.

Construction of the official barracks buildings was carried out by private contractors, chosen more with an eye to speed than to economy. DeLancey felt that preparing plans and advertising for competitive bidders took too much time. He had a preference for London firms, and for dealing with only a single general contractor on each project. Indeed, the barracks building campaign is often cited as the origin of general contracting in Britain. (Thompson, 1968, 82-83). In Dorset, John Fentiman and Son built the Dorchester and Bridport Barracks; they were also the barracks contractors for Exeter Cavalry Barracks and prisoner-of-war barracks at Portchester Castle and Plymouth. Thomas Loat and Son built the Wareham Barracks, as well as others at Portsmouth, Gosport, and the Isle of Wight. Thomas Gear, who seems to have not been involved in any other barracks contracts, built the original 'Red Barracks' at Weymouth. Richard Warr was responsible for some later additions at Bridport, and Thomas Curme the temporary addition at Dorchester (CME, 4th Report, 614-33). All of these contractors are shadowy figures who appear in none of the London directories I have consulted; perhaps all of them were local or regional builders. The costs for the one-troop barracks were remarkably similar, Gear, the Loats and the Fentimans each charging within a few pounds of £7,500, or approximately £130 per trooper. The original three-troop barracks at Dorchester cost £22,480, a similar cost per capita. The cost of Curme's addition is unknown. By contrast, the hired barracks were much cheaper per soldier: about £3,000 a year to rent and £4,513 to fit up the Poole Barracks for more than 4,000 men; £244 a year to hire and £939 to fit up infantry barracks at Weymouth for more than 800.

The most celebrated (or notorious) of the barracks builders, the Londoner Alexander Copland, was called to Dorset after a fire burned out the Red Barracks. DeLancey sent for him on 1 August 1798 and asked him to undertake to build a new cavalry barracks at Weymouth, and to have it ready before the King's arrival there a month later. The new barracks, located at Radipole on the southwest side of the Dorchester Road, was built of wood and designed to house 408 men and 392 horses (six troops of horse). Copland built with amazing rapidity. Though the land was not available until the 8th, Copland had men at work there the next day, and the buildings ready for occupancy only sixteen days later. (CME, 4th Report, 523). Though a fragment of the Radipole Barracks survives, and an Ordnance Map of 1857 shows 'The Old Barracks Square' at the site, its plan is unknown. The surviving timber building, now a row of seven cottages is at its northwestern corner, perpendicular to the road (Barrett, 1912, 166, 171-73). The RCHM report on Weymouth indicates they have been regarded as officers'

quarters (RCHM, 1970, 358). The symmetrical arrangement of other cavalry barracks, with the officers housed in a central building facing the parade ground, makes it unlikely that this simple one-storey building on a corner site housed the officers. They are more likely to have lived in York and Park Villas, also shown on the 1857 map. The surviving building, which includes a ventilating strip in the roof, may have housed troopers or horses. Unless a contemporary plan is discovered, however, the disposition of stables, men's quarters, and outbuildings at Radipole is simply a matter of conjecture.

Once completed, the buildings of each barracks were meanwhile entrusted to Barracks Masters appointed by the War Office. They were in charge of maintaining them; furnishing them with bedding, utensils, coal, and candles; and providing the troops with beer and the horses with feed and forage. They were charged by the Barracks Office with submitting a variety of weekly, monthly, and quarterly returns about their buildings, contracts, and tenants. These would reveal a good deal about the impact of the army on the economy of Dorset, in which the Barracks Masters must have been important figures. But these returns seem to have been lost with the rest of the Barracks Office records – though copies may survive in some local archives. The Barracks Office in London had an overall contract with Alexander Davison for barracks furnishings; he maintained depots in Bridport, Weymouth, and Poole for supplying the adjacent barracks. (CME, 3rd Report, 291). Local tradesmen provided repairs, coal, candles, and bedding (FC, 1797, 27-28; CME, 3rd Report). Barracks Masterships represented important items of political patronage, and Windham received several recommendations in 1794 for those in Dorset, (BL, Add. MSS. 37,904). J. T. Teed gained the appointment at Bridport, Henry Tooze at Dorchester, Thomas Morris at Wareham, and Thomas Rodber at Weymouth. Henry Stanley was appointed to the new Radipole Barracks after they were added to the list. All except Morris seem to have served out the war: he was succeeded at Wareham first by Major Samuel Moore, then by David Erskine, and finally by Thomas Bartlett sometime before 1804. (Lambert, 1975, vol. 100, 99-100; CME, 2nd Report, 284). At Poole, William Lewis was Barrack Master, with the assistance of Henry Corben.

Life in barracks revolved around the daily bugle (and roll) calls at reveille in the morning, retreat in the late afternoon, and tattoo at night. In between there were alternating periods of drill, idleness, and, for cavalry troopers the care of their horses. Surviving barracks order books and court-martial books (I have located none for Dorset) contain the sort of entries one might expect. There are repeated prohibitions of various activities, which indicates that the soldiers persisted in them. Drunkenness, casual urination, gambling, poaching, ball-playing (it damaged the buildings), stealing vegetables from local gardens, and staying out after tattoo were all subjects of constant censure. In addition to the guard at the barracks gates, patrols were dispatched every night to the neighbouring towns. Soldiers found out after tattoo (either 9.00 or 10.00 p.m. depending on the time of year) were arrested and confined to the cells until morning. Most soldiers remained in their rooms when not drilling, preferring the warmth of closed windows to the healthful ventilation constantly urged and ordered by their superiors. The barracks rooms were in fact a perfect breeding place for disease. A pneumonia epidemic ran through the 95th Foot in Poole Barracks in January and February 1795, little alleviated by the volunteer assistance of local doctors in the rented hospital a mile distant. (PRO, WO1/1094). None of these barracks included a garrison chapel, so on Sundays the men were marched to the local parish churches. Parish registers recording marriages, births, and burial thus often have a great deal to tell about the composition of a garrison. (Watkinson, 1976).

The publicans, meanwhile, were not exempt from billeting, despite the new barracks. Complaints continued. One problem was quartering regiments on the march. In some cases, the new barracks actually caused more billeting, by creating new marching routes. The huge flood of soldiers to Poole Barracks in 1795 moved the War Office to pay an extra subsidy to the publicans of Ringwood, who threatened to 'strike' by tearing down their signs and leaving the town without taprooms if not so compen-

sated (WO1/1094). Other problems stemmed from high wartime prices. Food prices were extremely high in 1795, and the innkeepers of Dorchester combined to violate the Mutiny Act by limiting the amounts of feed and forage they supplied to dragoon horses quartered on them. This was despite the fact the town's traditional 'quota' of two troops was at that moment shared between Dorchester and Weymouth. (PRO, WO1/1085, 33-35, WO17/2782). The Mayor had to mediate (Mayo, 1908, 688-90). Later in that year Parliament passed an Innkeepers' Relief Act raising the innkeepers' legal rate of compensation to that already given at Ringwood. The nightly rate for cavalry horses was now raised from 6d. to 10½d. (Clode, 1869, vol. 1, ch. 9). This, along with the completion of many barracks in 1795, eased the situation somewhat, but by 1799 regiments assigned to Dorset towns regularly overflowed the new barracks. In January 1799, for example, seven troops of the 11th Light Dragoons were quartered in Dorchester: a number of them, perhaps as many as three troops, had to be billeted in town. Meanwhile, Bridport and Wareham each held two troops of the Somerset Fencible Cavalry, half of whom had to be billeted in the towns. (PRO, WO17/2784). In Wareham in 1806, the publicans complained that 87 soldiers 'in stationary quarters' were already billeted on their fifteen houses, in addition to those filling the local barracks. When still more soldiers came marching through, the innkeepers had no beds to provide them, and were forced to give their legal payments back to the soldiers 'to induce them to lodge crowded altogether, and without Blankets or other covering on straw in stables, outhouses, and other places.' They begged the War Office to march soldiers to Weymouth and the West by some other route, 'or else ruin must fall upon them and their families.' Interestingly enough, the list of rooms and occupants per house they included to substantiate their plea showed an average occupancy rate of only 1.6 soldiers or family members per room (PRO, WO40/3). The War Office, as usual sympathetic to such requests, moved the large battery of Horse Artillery quartered in Wareham to Christchurch. (WO17/2790).

By the turn of the century, the military pressure on Dorset eased. The hired buildings at Poole were gradually given up. In January 1800 the listed capacity there was down to 2,200 and these were intended to be struck off once the war ended. A year later only three regiments were quartered in the county. During the summer of 1801, however, Napoleon threatened an invasion. Three regiments were encamped at Weymouth, in addition to the 2nd dragoons stationed at Dorchester and the other three cavalry barracks of the county, and the Stafford Militia at the hired barracks in Weymouth. In June 1801 Copland was given a contract to rebuild the burned-out Red Barracks in Weymouth for use by infantry units, probably by converting the attic and stable to sleeping rooms. Infantrymen slept two to a bed and were used to more crowding than cavalry troopers, but accommodating 360 where 59 had formerly been lodged was a considerable project. The building's plan nevertheless retained its dumbbell shape. The work was not pressed with Copland's usual speed, probably on account of developments in the war. Napoleon's invasion threat of 1801 turned out to be the preliminary to serious negotiations; hostilities were suspended by the Peace of Amiens in 1802. After the peace the remaining hired barracks in Poole, plus those in Weymouth (by now possessing a capacity of 1,048 men) were finally given up. (H.C., 1803-4 (62.), vol. 7, 304). At the same time, the established capacity of Radipole Barracks was reduced from 408 to 324 (PRO, WO30/81, 44). Copland did not bother to finish the Red Barracks until January 1803 (CME, 4th Report, 626-28).

The renewal of the war a month later was to cause an enormous expansion throughout the country. This time the threat of invasion, from Napoleon's huge army encamped at Boulogne, was the most serious of all. Existing barracks were re-opened to their old capacity, and hasty plans were made for housing the new levies called up under the Army of Reserve and Additional Force Acts, and the huge numbers of Volunteers who would march from their homes at the word of a French landing. DeLancey received orders during the summer of 1803 to build new barracks for 50,000 men and 10,000 horses, to be ready for occupation before cold weather set in. Local craftsmen were inadequate to this urgent schedule, and John Sanders estimated

that the barracks contracts hired and dispersed about Britain no fewer than 20,000 building artificers during the summer and autumn of 1803. (Sanders, 1808, 17-18).

In Dorset, the concentration was on cavalry. The huge infantry barracks at Poole were not re-established. The county now possessed only one infantry station with barracks, at Weymouth. The total numbers of troops in the county was thus lower than during the 1793-1801 war. But there was plenty of activity nonetheless. In 1803, Copland finished converting the Red Barracks for 360 infantrymen, and a large storehouse in Weymouth was hired and fitted out for 939 more. Called the Queen's Barracks, this apparently stood along Coneymar Lane adjacent to the Backwater. It has been mistakenly termed a cavalry barracks (Boddy and West, 1983, 75, 107). The cavalry station remained at Radipole, where it was expanded. In October 1804, Copland was given a contract to expand the barracks there by 504 places. When he completed the work in April 1805, Radipole had accommodation for 912 troopers, 51 officers, 986 horses, and 29 hospital patients. It was the largest single cavalry barracks in Great Britain. As a cavalry station, Weymouth was exceeded in capacity only by Ipswich and Canterbury, which each had several barracks. Copland charged £112,290 for his three projects in Weymouth: £53,200 for the original section of Radipole and the conversion of the Red Barracks, and £59,020 for the second section of Radipole in 1804-5. Perhaps because of the timber construction at Radipole, or perhaps because of economies of scale, this made Copland's work considerably cheaper per head than that of the other barracks contractors who built in Dorset.

The most dramatic moment in these wars, described by Hardy in *The Trumpet Major*, was during the latter part of 1804 and the first half of 1805. It was then that 1,300 Hanoverian troopers of the King's German Legion cavalry garrisoned Dorset. The K.G.L. Horse Artillery, 157 strong, crowded into Bridport Barracks, the heavy dragoons lay at Radipole, and the light dragoons at Dorchester. In addition, the Wiltshire Militia was quartered in Weymouth, (PRO, WO17/2788). The K.G.L. cavalry left during 1805, but returned in 1808-9, when two regiments of light dragoons were lodged at Radipole and Weymouth. It was in these years, in fact, that the Dorset garrison reached its largest size during the Napoleonic War, with three full regiments of cavalry (the 13th Light Dragoons at Dorchester, Bridport, and Wareham Barracks in addition to the two German units), and a full regiment of infantry, 693 men of the 53rd Foot, in the two Weymouth barracks. All told, this came to 2,641 soldiers (PRO, WO17/2791). The threat of invasion was largely past, however, and the Dorset barracks were increasingly put to use as depots for regiments serving abroad. In January 1812, the 9th and 11th Light Dragoons had their depots, and 286 men, at Dorchester Barracks; and the 12th, 13th, 14th, and 16th Light Dragoons' depots, with a total of 550 men, were at Radipole. The Weymouth infantry barracks were also kept in fairly constant use. Unusually, the Dorset Militia were stationed there in 1811 (PRO, WO17/2793).

Meanwhile, DeLancey's Barracks Department had been the subject of a considerable scandal in 1806-7, as the Commissioners of Military Enquiry revealed its ramshackle systems for accounting for the vast sums of money – more than £9m – spent on the new barracks. DeLancey's plea that speed of construction was more important than economy or system was disregarded. He was officially disgraced, and the office put under a three-man, civilian Barracks Board operating under Treasury rather than the War Office control. By 1814, plans to dispose of excess barracks capacity were already under discussion. the Commander-in-Chief nominated all three Weymouth barracks for disposal, citing the low ceilings at Queen's and the timber construction at Radipole (PRO, T1/3444). The Barracks Board took a different view. They protested that the Red Barracks 'was erected at a large expence, is of an excellent construction, and in a most healthy situation.' They also suggested that Radipole, being weather-tiled, was 'almost equal to a permanent building' and should be retained, at least on a reduced establishment, on account of the royal residence at Weymouth. Instead, they recommended demolishing the temporary additions at Dorchester. Surprisingly, the Commander-in-Chief agreed. (PRO, WO55/1856, 210-11, 238). In the proposed

barracks peace establishment he sent to the Treasury after Waterloo, he included all three suggestions, and won the Treasury's agreement.

The Treasury Minute of 5 April 1816 reduced the barrack accommodation in Great Britain from the wartime peak of over 160,000 to a peacetime establishment of 40,000. Citing the army peace establishment of only 25,000 soldiers, the Treasury considered this more than sufficient – the excess being explained by the continued maintenance of barracks in various ancient castles and forts, for coastal anti-smuggling patrols, and as halting-places for troops on the march, in addition to the army's permanent stations. (PRO, WO55/1856, 399-405). It was now agreed, however, that soldiers should henceforth sleep only one to a bed, thus halving at a stroke the rated capacity of many barracks, and retaining potential additional accommodation in case of emergency. Under this Minute, the Dorchester Barracks was returned to its original size of 186 rank and file, fifteen officers, and 188 horses, and Radipole to 462 men, 47 officers, and 640 horses. (H.C., 1822 (188.), vol. 19, 217-19). At the Red Barracks, the limitation of one man per bed operated to cut the capacity nearly in half, from 360 to 200. The Barracks Board once again protested. The men were lodged in fifteen 'capacious' rooms, 41 by 22 feet in the 1847 return, each with 24 men in double bedsteads. Even in single bedsteads, they felt, it would be useless to put fewer than eighteen men in each room, and impractical to tear down any parts of the building. They recommended (successfully) that the rated capacity be raised to 270 men and 17 officers (PRO, WO55/1868, 147-48). Meanwhile Wareham and Bridport Barracks and the land beneath them were offered for sale in August 1816, thus destroying DeLancey's vision of a chain of peacetime anti-smuggling stations. The Barracks Board hoped for offers of £2,000 each; if not received they were to be subdivided and sold off as small lots (PRO, WO55/1856, 78-79).

The Dorset barracks were only partially occupied during the 1820s, as the garrison in Great Britain shrank to as few as 17,000 troops. The occupancy of the barracks became an object of Parliamentary scrutiny in 1822. The maximum number housed at Dorchester during the year was seven (probably only there to guard government property) and at the Red Barracks there had been no one. What activity there was had been at Radipole, where as many as 271 troopers and 19 officers had lodged (H.C., 1822, (188.), vol. 19, 217-19). Cavalrymen and their superiors evidently preferred the seaside resort to the county town. But this popularity was literally wearing the place out. The Ordnance Board, which resumed control of all barracks in Britain when the Barracks Department was abolished in 1822, traditionally looked with disfavour on wooden buildings. A report characterized the Radipole buildings as 'dilapidated' despite repairs costing £2,699 over the preceding five years. Another £1,700 would be required soon, and £700 per annum, on average, after that. The Ordnance Board clearly wanted to be rid of them; but then they also wanted to save the £30 annual rent on the land beneath the Dorchester barracks. The Commander-in-Chief insisted, however, that the army needed a cavalry station, with a riding house and accommodation for two squadrons, between Exeter and Brighton. Dorchester was thus saved, but Radipole was sold off. In order to maintain the army's presence in Weymouth, the Ordnance Board re-converted the adaptable Red Barracks back into a one-troop cavalry barracks also capable of housing, if necessary, about a hundred and fifty infantrymen. (PRO, WO44/543, RCHM). With these modifications, the two remaining 'DeLancey' barracks in Dorset continued to give good service until after the conclusion of the Crimean War (H.C., 1857-58 (0.57), vol. 10, 206).

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study of British army barracks in this era – and, finally, to any reader of this article who wishes to supplement or correct it with more information.

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DORSET BARRACKS IN THE EARLY NINETEENTH CENTURY

Army barracks as of July, 1805

place	begun	type	construction	field offrs	cpts	subalterns & staff	quarter masters	nco & pvts	horses	hosp capac
Bridport	1794	cavalry	brick		1	2	1	58	63	6
Dorchester	1794	cavalry	brick	2	4	9	4	376	400	26
Wareham	1794	cavalry	brick		1	2	1	58	63	6
Weymouth, Red	1794	infantry	brick	2	6	9		360		30
Weymouth, Radipole	1798	cavalry	wood	6	10	24	11	912	986	29
Weymouth, Queens	1803	infantry	rented					562		

Sources: CME, 2nd Report, 284, 4th Report, 415

Excavation of Neolithic and Bronze Age Pits and a Section of Roman Road on a Pipeline near Lodge Farm, Pamphill, Dorset

PETER ADDISON

SUMMARY

In February 1988 an excavation was undertaken to investigate a section of the Hamworthy to Badbury Roman road in advance of pipeline construction.

The excavation revealed flanking ditches associated with the Roman road, although nothing survived of the road itself. A group of early Neolithic pits were also uncovered at this stage and further pits, including one containing Bronze Age pottery, came to light during the construction of the pipeline. A series of linear, Post-Medieval features crossed the site, cutting the southern road ditches and one of the Neolithic pits.

LOCATION (Fig 1)

The pipeline crosses the route of the Roman road at ST 9750 0210 in a field immediately to the east of Lodge Farm, some 1400 m south-east of Badbury Rings. The site lies approximately midway between the Rivers Allen and Stour on land that is relatively flat but which forms part of the general slope from Badbury (102 m O.D.) to the flood plain of the River Allen. The elevation of the site itself is 39 m O.D. It has been under plough for the past 25 years and the Upper Chalk bedrock is heavily scarred by recent plough marks. Further damage to archaeological features has been caused by rabbit burrowing.

THE EXCAVATION (Fig 2)

An initial trial trench, 30 m by 1.5 m, was excavated by hand across the route of the Roman road. The trench was orientated north-east/south-west, at right angles to the road and followed the route of the proposed oil trench. This exposed a northern flanking ditch, a further section of which was subsequently excavated along the route of the gas trench 1.5 m to the east.

At the south-western end of the trench, 3 ditches ran parallel to the alignment of the Roman road (Plate 1) and the entire 4.5 m

affected by the two pipe trenches was opened up. The trench was further extended in an attempt to locate a ditch excavated by the National Trust beneath Lodge Farm (Papworth 1987) which was thought might extend within the pipeline easement.

No trace of this feature was found, but the extension did uncover several other features, four of which proved to be Neolithic pits. Due to the shallow nature of the pits it was decided that any similar feature lying within the pipeline easement, even though not directly in the path of the pipe trenches, would be under threat from machine tracks once the topsoil was removed at the start of pipeline construction. The extension was, therefore, enlarged to a width of 13 m with the aid of a J.C.B. This revealed the vestigial remains of several, possible archaeological features but no more sizeable pits.

Further archaeological features were uncovered to the north west of the Roman road when the topsoil was removed for pipeline construction (Plate 2).

THE NEOLITHIC AND BRONZE AGE PITS (Figs 2 and 3)

A total of 21, for the most part circular or sub-circular features were investigated; of which 7 proved to be convincing archaeological features and a similar number to be of natural origin. It was



Plate 1 Lodge Farm: Excavated features in southern half of site, looking south-west

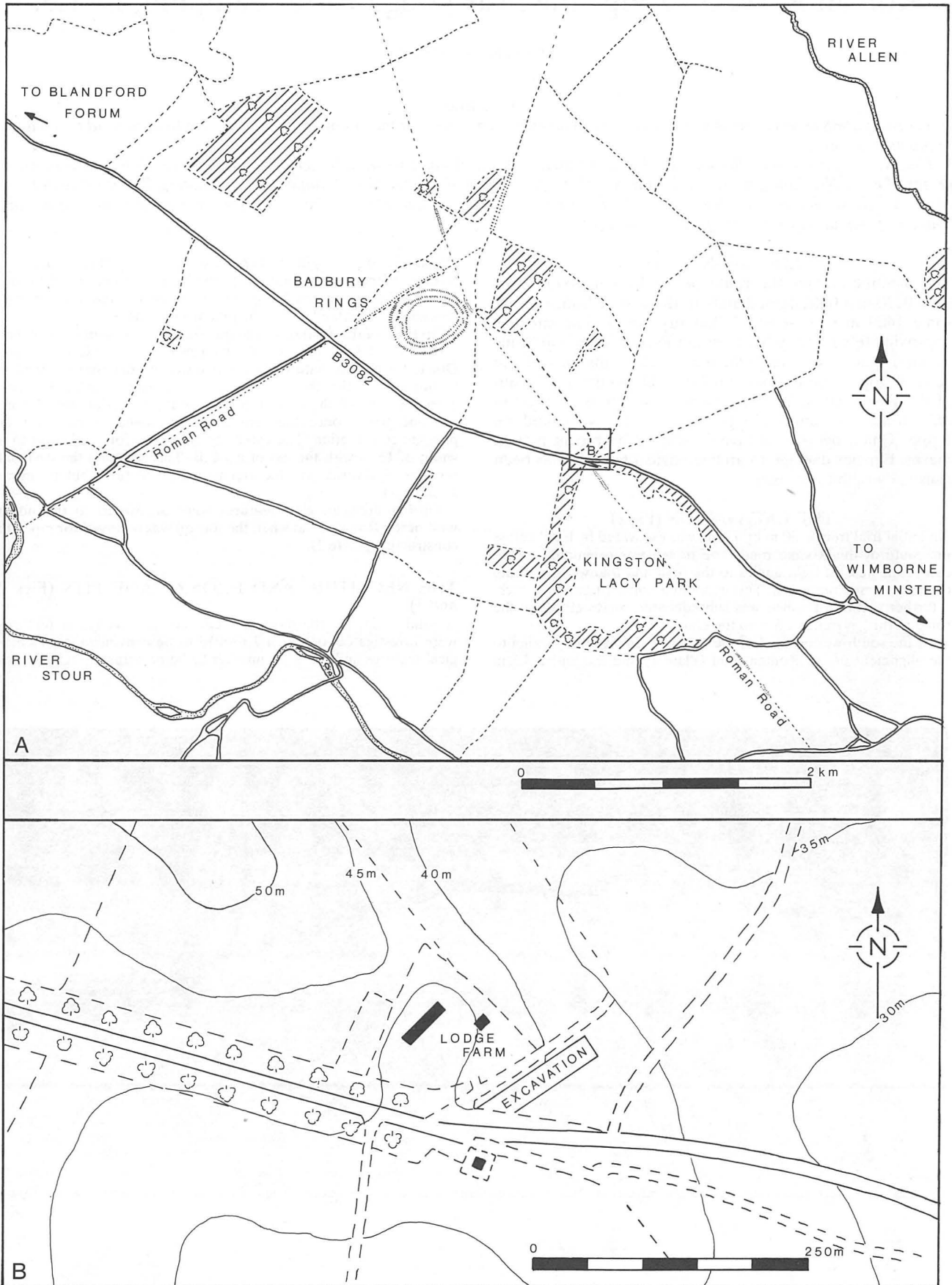


Figure 1 Lodge Farm: Location plans

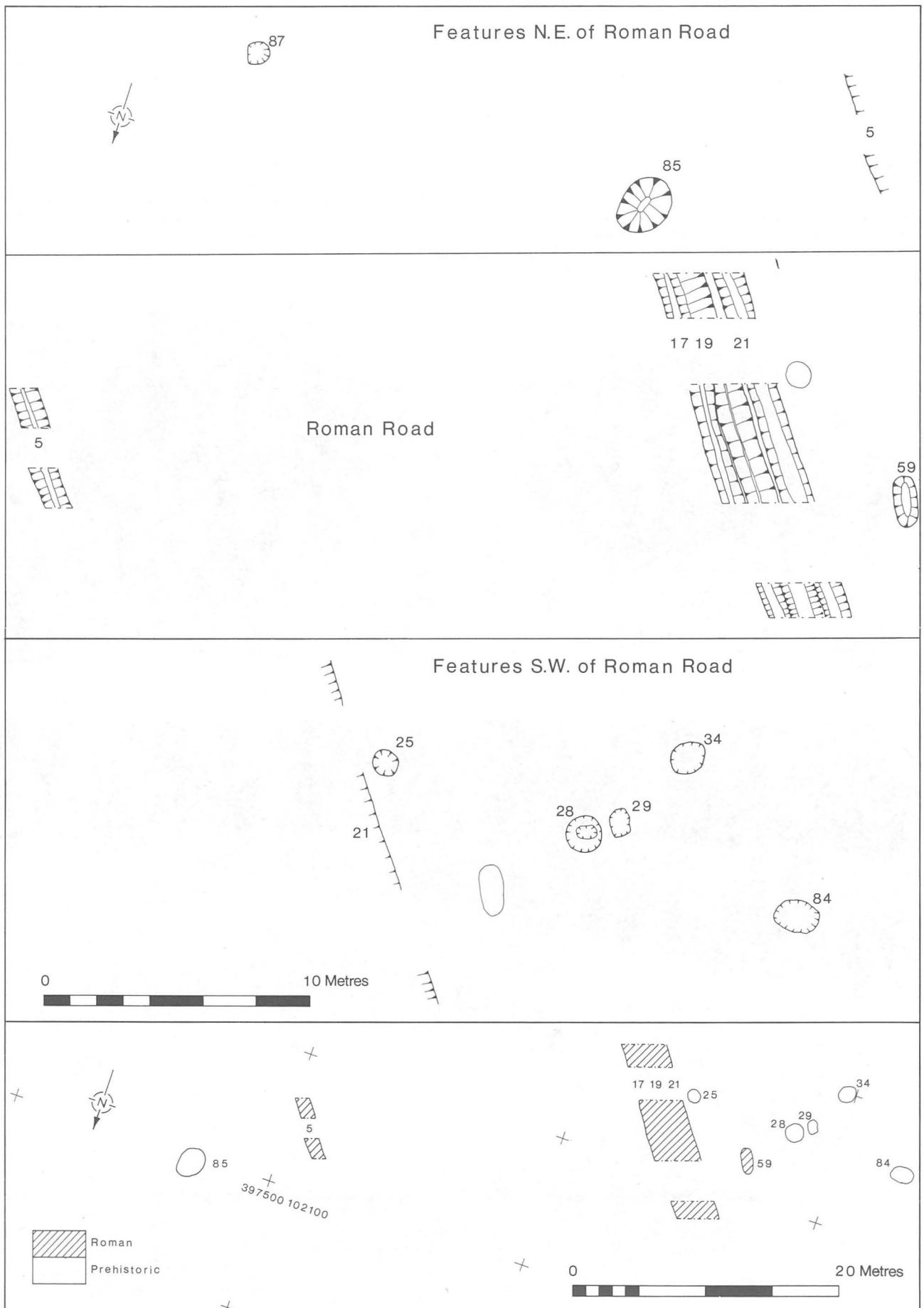


Figure 2 Lodge Farm: Site plans

not possible to determine whether the remaining 7, which varied in depth from 0.07 m to 0.20 m, were the vestigial remains of archaeological features or the results of natural processes.

Details of all excavated features can be found in the archive at the Dorset County Museum but only definite features will be described in this report. These comprise contexts 25, 28, 29, 34, 84, 85 and 87, all of which, with the exception of 85 and 87, were found in an area 15 m × 10 m immediately to the south-west of the southern road ditches. The remaining two pits were revealed when the topsoil was removed for construction to the north-east of the Roman road.

Context 25 was circular (1.00 m diameter) with steeply sloping sides and a slightly rounded bottom with a maximum depth of 0.40 m. The upper fill had been largely disturbed by animal burrowing but the lower fill, which consisted of dark grey/brown loam with many chalk fragments and frequent flints appeared undis-

turbed. It contained pottery, flint and bone, including the only sheep bone to be found on the site. No silting was apparent and the pit is unlikely to have remained open for any length of time before being backfilled.

Context 28 (Plate 3) was circular (1.20 m diameter) with some irregularities due to animal disturbance. The profile was uneven with a steeply sloping north-east side giving way to a flat-bottomed shelf at a depth of 0.22 m. Into this, on the south-western side, was cut a sump (0.70 m diameter) which gave a maximum depth to the pit of 0.42 m. The sump had been backfilled with a dark brown loam, above which lay a band of silty, grey/brown loam deposits which appeared to be a mixture of washed and backfilled material. The uppermost fill of the pit again appeared to consist of backfilled material and contained large quantities of domestic type refuse which was also present, in slightly smaller quantities, in the other two layers.



Plate 3 Lodge Farm: Pit 28, showing sump

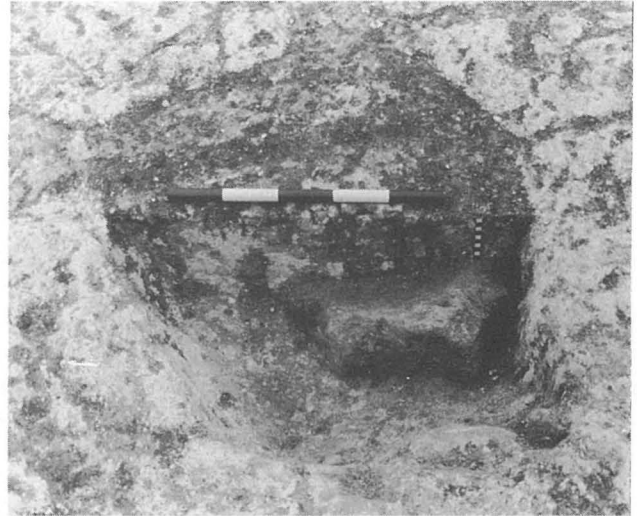


Plate 4 Lodge Farm: Saddle Quern in Pit 29



Plate 2 Lodge Farm: Site during construction, Pit 85 in foreground, northern Roman Road ditch in centre. Looking south-east



Plate 5 Lodge Farm: Domestic refuse in Pit 34

Context 29 (Plate 4) was circular (1.00 m diameter) with steep sides, although with a more gradual slope on the north side, and was flat bottomed with a maximum depth of 0.30 m. Ash grey silts had accumulated in the bottom of the pit on which a large saddle quern had been placed. The rest of the pit had been backfilled with an uneven mixture of compact chalk, ash grey silt and brown loam. No other finds were recovered from the pit.

Context 34 (Plate 5) was circular (1.20 m diameter) with steep sides, a flat bottom and a maximum depth of 0.40 m. Some silting was evident against the sides of the feature but the greater part of the fill was made up of a dark brown loam which contained large quantities of flint, including several flint tools, pottery and bone. More wasteflakes were recovered from this pit than from all of the other Neolithic pits put together. Tools included scrapers and a fragment of polished axe. The upper level of the pit had been cut by a shallow, post-medieval, linear feature.

Context 84 was roughly oval in plan (1.75 m × 1.20 m) with gently sloping sides and a rounded bottom (0.37 m deep), rising to a slight ridge in the centre. A thin layer of grey, silty chalk lay over the base of the feature, above which was a layer of mid brown, loose loam with a few chalk flecks and several large flints. As well as flint, bone and pottery the pit also contained a saddle quern.

Context 85 (Plates 6 and 7) lay approximately 50 m north-east of the main group of pits. Sub-circular in plan (2.00 m × 1.80 m), its sides tapered sharply to an oval base just 0.60 m × 0.20 m producing a large cone shaped feature 1.40 m deep. The bottom 0.70 m of fill consisted of loose chalk rubble and chalk silts above which lay a 0.10 m band of orange brown clay loam. The remainder of the fill,

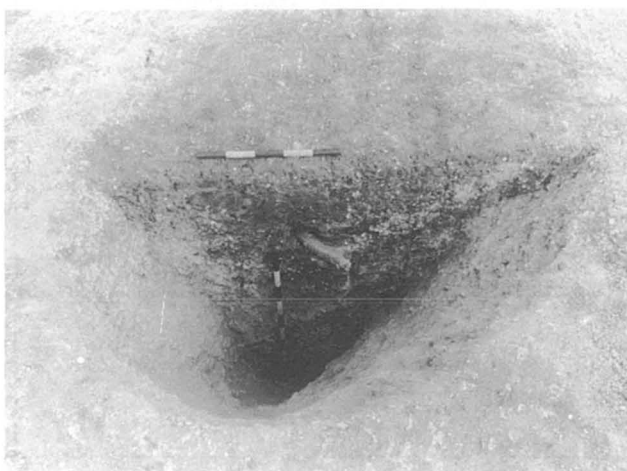


Plate 6 Lodge Farm: Pit 85, half sectioned

from which the bulk of the finds derived, was a dark brown loam with occasional clay lumps. Numerous struck flints were recovered from this layer, including 7 scrapers, all but two of which were round or thumbnail type. Pottery, animal bone and part of a cylindrical clay loom weight (Fig 4) were also recovered. The absence of weathering to the sides of the pit suggests that it did not remain open for any appreciable period. An antler, from the same context as the pottery recovered, was submitted to Harwell for Radiocarbon analysis, Har-9598, and produced a conventional Radiocarbon Age of BP 3470 ± 70, cal 1900-1710 B.C.

Context 87 lay on the extreme periphery, being located some 15 m east of context 85. It was a subcircular feature (1.00 m × 0.70 m) with steep sides and a flat bottom (maximum depth 0.30 m). It had been backfilled with a brown sandy loam, containing fragments of chalk. No finds were recovered from this feature.

THE ROMAN ROAD

The section of road cut by the pipeline forms part of the Hamworthy to Bath route; starting at Hamworthy it runs almost due north to Lake Farm at which point it turns north-west towards Badbury Rings, from whence it continues in the direction of Bath. Despite being marked, at this point, on the O.S. 1:2500 map as a substantial earthwork no visible signs now remain and excavation failed to reveal any trace of road surface or agger. A slight camber of protected chalk did, however, survive to indicate its position, bounded on either side by flanking ditches.

The flanking ditches (Figs 2 and 5)

A shallow flanking ditch, 5, was found to the north-east of the road whilst to the south-west three parallel ditches, 17, 19, and 21, followed the road alignment.

Ditch 5 was of V shaped profile 0.50 m deep and 0.90 m wide at the top. The lower fill of this ditch consisted of yellow/brown sandy loam with frequent chalk flecks. Above these initial silts were many large flint nodules which may once have formed part of the road make-up before being dragged into the silted up ditch by plough action.

Of the three ditches excavated on the south-western side, the central ditch, 19, was stratigraphically the oldest and most closely resembled 5 in shape. This ditch was 0.60 m deep and approximately 1.00 m wide. It had been cut on the north-eastern side by 17, a steep sided, flat bottomed ditch 0.35 m deep and 0.80 m wide. The high proportion of chalk in the upper fill of 19, suggests that this is backfill from the later excavation of 21, just to the south-west. This ditch was 0.40 m deep and 1.10 m wide and of similar profile to 17.

No dateable finds were recovered from the excavation of the ditches and the purpose of the later recuts is uncertain. The distance between what are assumed to be the two original flanking ditches is 26.50 m; exactly 87 feet. This compares with a width of 82 feet on the best preserved sections of the road (RCHM 1970; 529).

A total of 3.00 m was excavated of ditch 5, and 7.50 m of each of the ditches 17, 19, and 21.

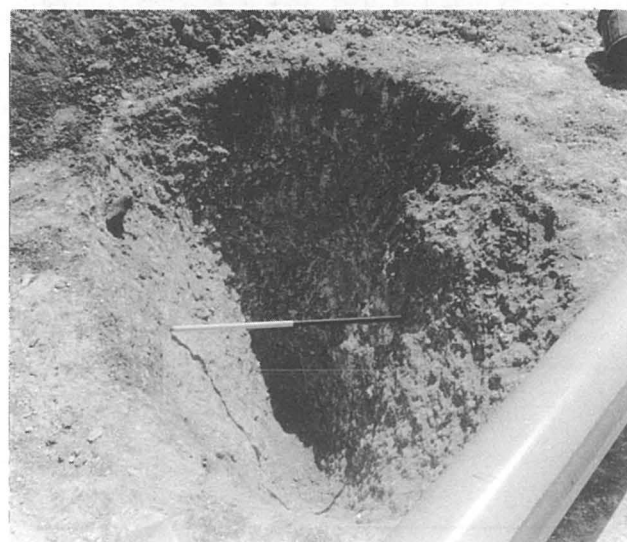


Plate 7 Lodge Farm: Pit 85, totally excavated

Context 59 A large oval shaped (1.80 m × 1.00 m) pit was found 3.50 m to the south-west of 21. It had steep sides on its long axis but sloped gradually on the shorter north-west and south-east ends to a maximum depth of 0.60 m. One fragment of wheel-thrown pottery was recovered from the fill which consisted of chalk silts and redeposited chalk.

THE POST-MEDIEVAL FEATURES (PLATE 1)

A series of four, parallel and equidistantly spaced, gulleys crossed the site, running north-west/south-east. Where they survived to a depth sufficient for them to be excavated, they all appeared to be

lined with small stone packing. Both the gulleys and the stone packing increased in size as they crossed the softer ground of the backfilled ditches. The limited finds recovered from these features suggest that they are of Post-Medieval date.

These features are probably best seen as some form of wheel tracks and may be associated with a saw mill that is thought to have stood in the north-west corner of the field. The fact that they run in such straight lines suggests that the vehicles would have formed part of some fixed arrangement, possibly winched by a traction engine.

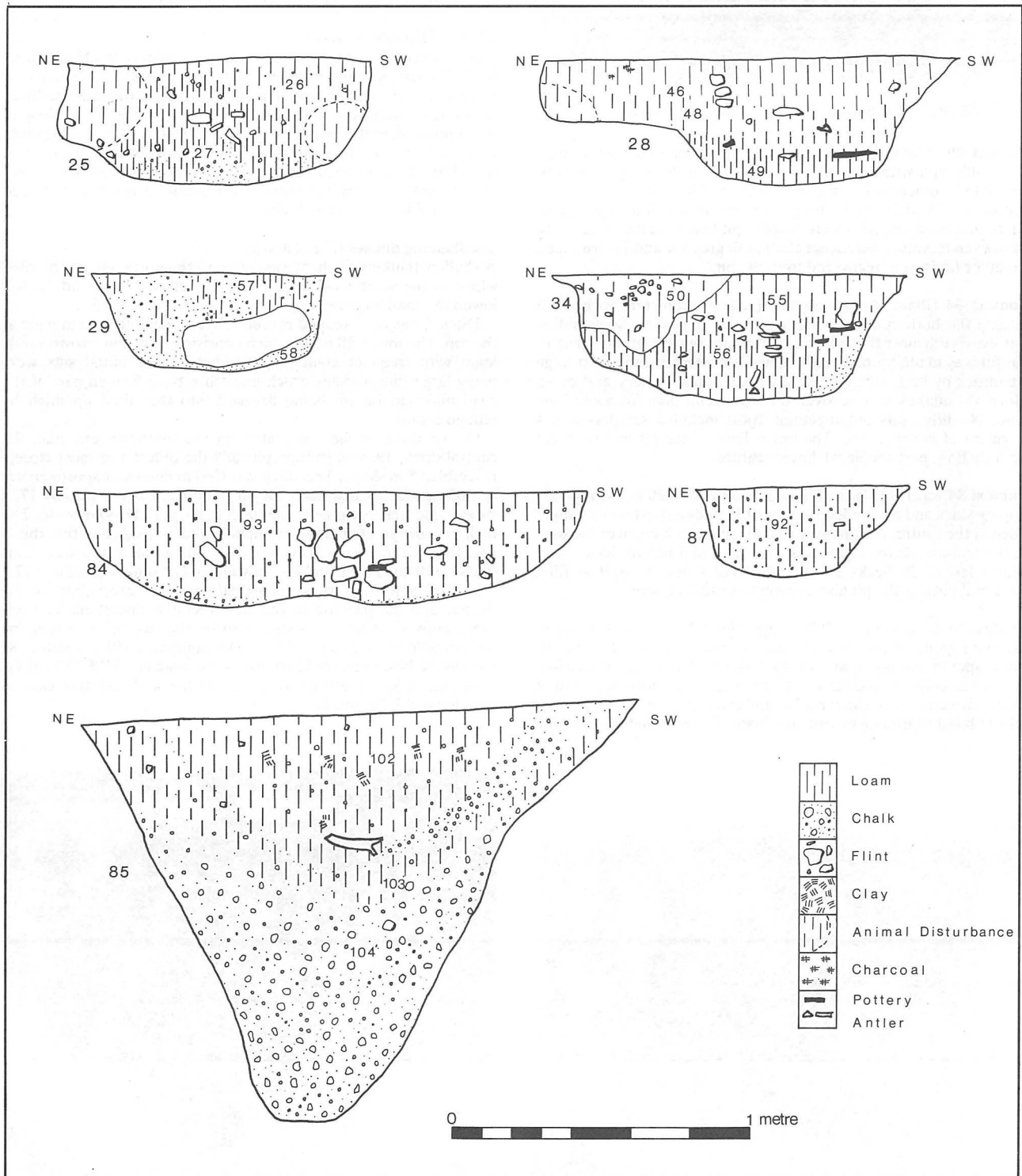


Figure 3 Lodge Farm: Pit sections

THE POTTERY

ROSAMUND M J CLEAL

A total of 108 sherds, weighing 1157g, were recovered from six features at Lodge Farm (Table 1). The material from three of these features (25, 28 and 34) is certainly of earlier Neolithic date, but that from features 84 and 85 is problematic, and some at least must belong to the second, rather than to the third or fourth, millennium cal B.C. Feature 50, a Post-Medieval wheel track, cut through the upper layers of Feature 34 and produced a single sherd, in a fabric typical of the earlier Neolithic pottery. This sherd must presumably be derived from 34. The assemblage is treated firstly by feature, and secondly by ceramic style.

Feature 25 Only one vessel is certainly represented in this feature, by sherds of fabric FS:2/Neo. One rim (P1) and eight body sherds almost certainly belong to a single uncarinated plain bowl of indeterminate diameter. The remaining 26 sherds could belong to this vessel, but do not necessarily do so. P1 is certainly earlier Neolithic in date.

Feature 28 A minimum of four vessels are represented in feature 28, one in each of the four fabrics occurring in the feature. P2-P4 belong to three of these vessels, and one vessel is represented only by body sherds in an unclassifiable fabric with small inclusions. P5 could belong to the same vessel as P3, as both are in fabric FS:2, but this is not certain. The lug of P5 is oval and unperforated; there is no indication visible in the section of the method of attachment. There is too little surviving of each vessel to be certain of form, although P2 would appear to be a large open uncarinated bowl, and P4 a small neutral uncarinated bowl or cup. One very small rim fragment (not illustrated) in a fabric with flint and sand may represent another small vessel. The three illustrated vessels are certainly of earlier Neolithic date.

Feature 34 Sherds representing at least three separate vessels were

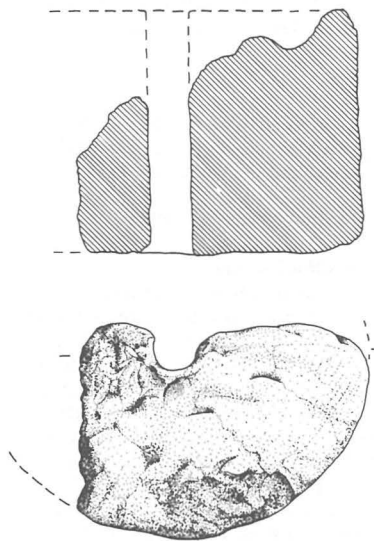


Figure 4 Lodge Farm: Clay loom weight from Pit 85, 1/2 life size

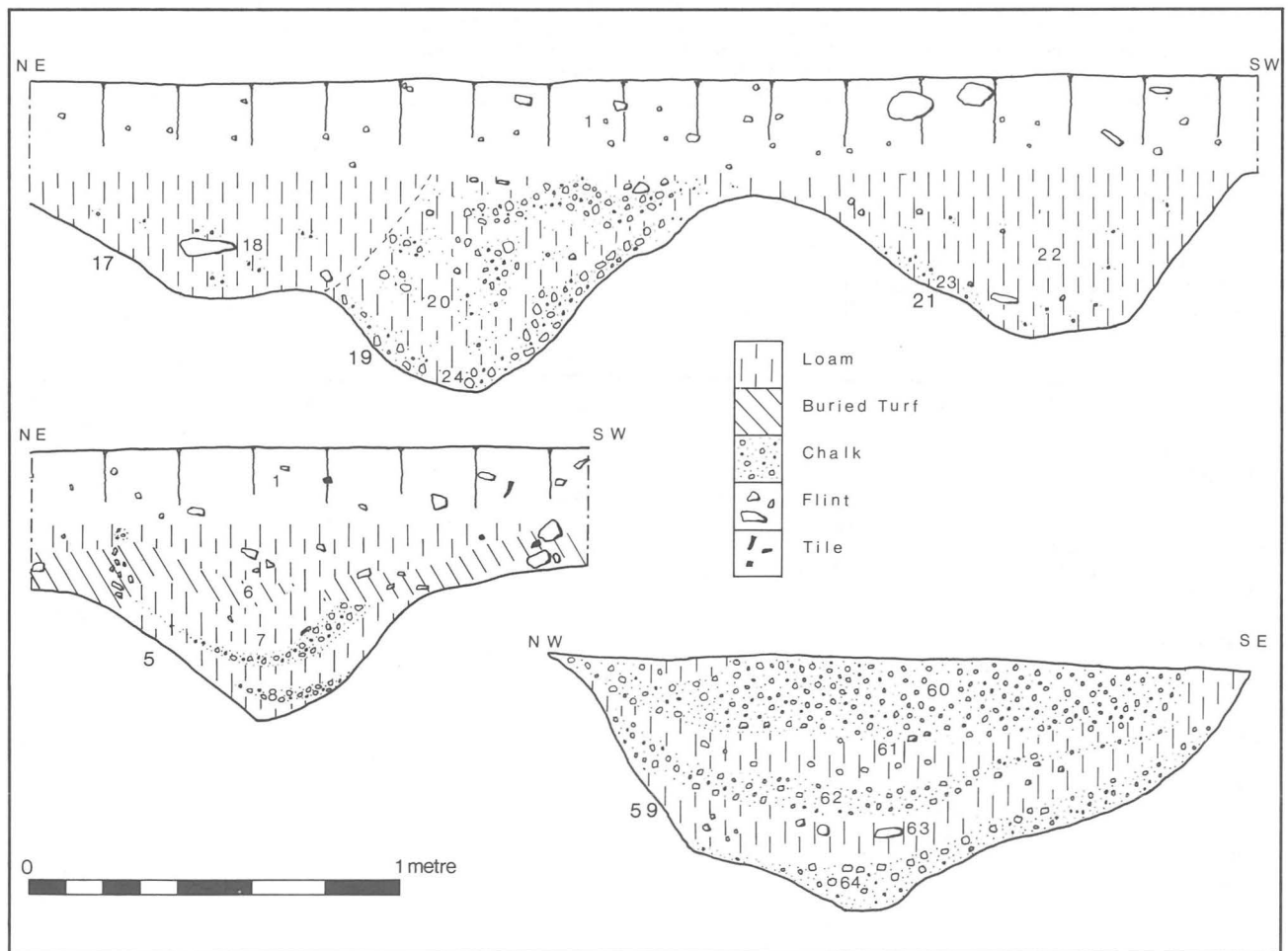


Figure 5 Lodge Farm: Roman Road, ditch sections

may be assigned to the South-Western regional style (Whittle 1977). This style occurs throughout the south-western peninsula, and in southern and central Wessex. In eastern Dorset it appears to be approaching the eastern limits of its distribution, although it is also represented as far east as Sussex (Smith 1974). The area around Wimborne contains a number of sites of this period, and it would appear to have been an area favoured for settlement in the early to middle Neolithic. Approximately 3.5km to the south-west a pit in Pamphill parish produced a small assemblage of the South-Western style (Field, Matthews and Smith 1964, 352-360), and approximately 1km south-west of that, another pit with a similar assemblage was excavated at Corfe Mullen (Calkin and Piggott 1938). More recently, work at Moortown Aerodrome SZ 040970 has uncovered several pits, with South-Western style pottery (Note in *Proc. Prehist. Soc.* 51, 1985, 323). Further afield, similar pottery was recovered from the ditch of Holdenhurst long barrow, on the north-eastern outskirts of Bournemouth (Piggott, 1937), and at Hadden Hill (Wilson 1980) and Southbourne, Bournemouth (Calkin 1947). Unfortunately none of the local assemblages have radiocarbon dates, although there should be determinations available for the Moortown material in due course (*Proc. Prehist. Soc. ibid*). A date within the fourth millennium cal B.C. would be expected for pottery of this style.

2) Sherds in fabric FS:4

This fabric is a distinctive one, with well-sorted dense flint temper, which, unlike that in fabrics FS:1/Neo and FS:2/Neo, appears to

TABLE 2

Fabric Catalogue

Fabrics were defined with the aid of a $\times 10$ hand lens. Hardness is expressed using two terms: 'hard' – not scratched easily with the fingernail, and 'soft' – scratched easily with the fingernail. Frequency of inclusions was estimated by eye, using four classes: rare (present as only occasional inclusions, and not necessarily present in every sherd of the fabric, sparse, moderate and dense. Using comparative charts showing known percentages of inclusions these terms may be equated to less than 1%, 1-5%, 6-10%, 15% or greater. Size of sand grains is expressed using two terms: 'fine' – individual grains not distinguished easily at $\times 10$ magnification, and 'coarse' – individual grains seen easily at $\times 10$, and, usually, with the naked eye. The fabric code is composed of the initial letter, or abbreviation for, the principal inclusions; a number, to distinguish it from other fabrics with the same type(s) of inclusion; and an abbreviation to indicate the presence of diagnostic sherds of a ceramic style. The latter are:

Neo: earlier Neolithic

BA: Bronze Age (in this case Middle Bronze Age)

Indet.: indeterminate

CaG:1/?BA	Soft fabric with a hackly fracture, containing moderate to dense calcareous inclusions which are almost certainly finely crushed shell (<3mm, but most <1mm), and moderate to dense grog (<4mm, most <2mm).
FG:1/?BA	Hard fabric with a hackly, slightly laminated fracture, containing sparse flint (<3mm, most <1mm) and moderate to dense grog (<3mm, most <1mm).
FS:1/Neo	Soft fabric with a hackly fracture containing dense flint (<5mm) and moderate to dense coarse sand.
FS:2/Neo	Soft fabric with a hackly fracture, containing moderate flint (7mm) and a moderate fine to coarse sand.
FS:3/Indet.	Hard fabric with a hackly fracture, containing sparse flint (<2mm) and sparse fine sand.
FS:4/?MBA	Hard fabric with a hackly fracture, containing dense flint (<4mm) and sparse fine sand.
S:1/Neo	Soft fabric with a smooth fracture, containing dense fine to coarse sand. Some small fragments of iron oxides are also present.
V:1/Indet.	Hard, slightly laminated fabric containing rare flint (<2mm).

have been calcined and well crushed before incorporation in the clay body: some at least of the fragments have a rounded appearance which is unlike that of the inclusions in the certainly Neolithic fabrics.

Form: the only featured sherds in this fabric are one certain base (P17), and one possible base (P10) from flat-bottomed vessels, and a plain flat-topped rim (P16). All are fairly thick-walled. The rim sherd belongs to a straight-sided vessel with a diameter of at least 20cm.

Ceramic style: these sherds, which may all represent separate vessels, are likely to belong to the Deverel Rimbury tradition of the Middle Bronze Age. The fabric with its frequent and well-prepared flint temper, is much more likely to belong to that tradition than to any earlier style, and the form of P16 would be consistent with its belonging to a straight-sided bucket-shaped vessel. P10 occurs in the same pit as the six sherds belonging to P9, which is undoubtedly earlier Neolithic in date. It is possible that P9 is residual, but an alternative, taking into consideration the predominance of Neolithic material in this pit, is that P10 is intrusive. The two other sherds of this fabric, from pit 85, may be dated by the radiocarbon determination which calibrates to 1900-1710 cal B.C., although this seems slightly too early for Deverel-Rimbury pottery, for which a date in the second half of the millennium might be reasonably expected. However, any consideration of the material in this pit must take account of the majority of the ceramic assemblage, the vessels represented by P11-P15.

3) P11-P15

Fabric: two fabrics are represented in the six sherds of P11-P15. One is a flint-tempered fabric (FS:3) which, like fabric FS:4, contains flint temper which has been well-prepared. At least some of the fragments have a rounded appearance which suggests crushing of calcined flint (fresh flint does not shatter in the same manner), and the size is well controlled (<2mm); however, in FS:3 the temper is sparse, and unlike FS:4, this fabric cannot easily be placed within the potting traditions of the Middle Bronze Age. The other fabric, U:1, does not contain noticeable inclusions, and rare voids are visible on the surface. This is unlike the other fabrics present at the site, and does not suggest a likely date for the vessels.

Form: P11-P16 may be round or flat-bottomed, but as it has already been noted that they are unlikely to be earlier Neolithic, on the grounds of fabric, they must be assumed to have flat bases: the surviving parts of the vessels themselves do not indicate which interpretation is more likely to be correct. The angle of lie of the rim is not certain in any of the vessels, and it is possible that P11-P13 belong to a single jar with a slack shoulder. P14 appears to belong to a similar form, but with a rounder shoulder, while P15 represents a very slack-bodied vessel with a rim diameter in the range 10-14 cm. All the vessels are plain.

Ceramic style: this small group of pottery is extremely difficult to assign to a ceramic style, due to its rather amorphous forms and the ubiquity of flint-tempered fabrics throughout several millennia. However, there are clear indications that the group is not earlier Neolithic, and indeed this was felt by the writer to be the case before the radiocarbon date (1900-1710 cal B.C.) was available. In addition the sherds of P11-P15 are in better condition than the putatively Middle Bronze Age ones in the same feature (P16-P17), which are in a fabric more likely to survive wear well than P11-P15. This suggests that the Middle Bronze Age sherds are residual, and indeed it was felt, before the radiocarbon date was received, that the likeliest date for P11-P15, and therefore for the feature, as they are in fairly good condition, is within the later Bronze Age, and perhaps in the very earliest part of the first millennium B.C. Although P11-P15 are not absolutely typical of Barrett's Post-Deverel Rimbury pottery (Barrett 1980, Bradley *et al* 1980), this is a period in which plain, often flint-tempered, slack-bodied jars do occur. P11-P15, although slightly anomalous, would fit much better into this milieu than into any earlier one: it is possible that the radiocarbon date, which was derived from an antler, is misleading. Another alternative, which, in the writer's opinion is considerably less likely, is that the date is correct and the assemblage does belong to a period in the early part of the second millennium cal B.C. for which our knowledge of the ceramics in use in domestic contexts is admittedly slight, although the funerary assemblage is well known. This problem appears unresolvable until more finds in the area become available, both from the earlier and the later Bronze Age.

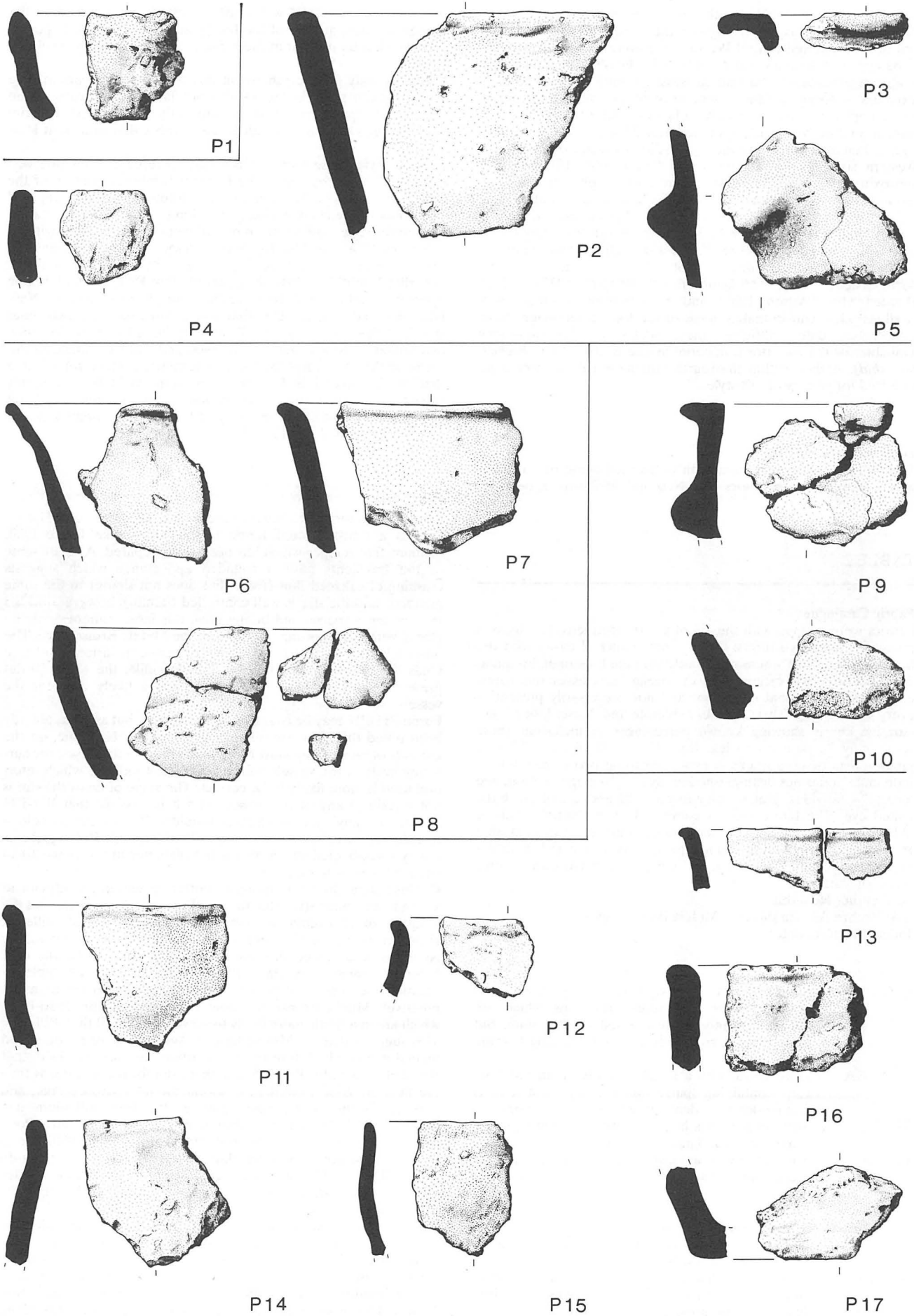


Figure 6 Lodge Farm: Pottery, 1/2 life size

TABLE 3

Catalogue of illustrated pottery

Entries are given in the order: description of sherd(s)/fabric (see fabric catalogue for full description)/colour, in the order exterior surface: core: interior surface/condition. Context.

Asterisks indicate sherds which almost certainly represent separate vessels; the remaining sherds could belong to these vessels, or to others.

- *P1 One rim sherd and eight body sherds of a bowl with a diameter greater than 12cm/FS:2/dark grey-brown: black: dark grey; the interior directly below the rim is brown/the exterior is in poor condition, with several of the sherds very worn; the interior is fair to worn.
Feature 25, context 26/27
- *P2 One plain rim sherd of an uncarinated bowl with a rim diameter of at least 26cm, and probably greater than 30cms/FS:1/pale orange-brown: dark grey: dark grey, red-brown/fair to worn.
Feature 28, context 49
- *P3 One plain rim sherd of a vessel with a sharply out-turned rim; this could belong to the same vessel as P5/FS:2/pale orange, outer edge of rim dark grey: -: pale orange/fair.
Feature 28, context 49
- *P4 One plain rim sherd of a bowl of indeterminate diameter/S:1/orange to pale orange surfaces/worn.
Feature 28, context 49
- P5 One body sherd with an oval, unperforated, horizontally applied lug; the method of attachment is not clear/FS:2/surfaces pale orange/fair.
Feature 28, context 49
- *P6 One plain rim sherd of a well-finished bowl with a flared mouth; the rim diameter is indeterminate/FS:2/grey-brown: dark grey: dark grey/fair.
Feature 34, context 55
- *P7 One plain rim sherd of an uncarinated bowl with a diameter of at least 28cms/FS:2/black: black: dark brown/fair.
Feature 34, context 56
- *P8 Two plain rim sherds and three plain body sherds of an uncarinated bowl; both rim sherds join separate body sherds/FS:1/orange-brown: exterior margin orange: dark grey core: grey/fair.
Feature 34, context 65
- P9 One rim sherd and five body sherds of a vessel with a sharply out-turned rim and an oval, unperforated, horizontally applied lug. The method of attachment of the lug is not clear, although the lug appears to have a markedly convex under surface, which may extend for some way into the vessel wall. These sherds could belong to the same vessel as P3 and/or P5, although the colouring is different/FS:2/dark grey, grey-brown, pale brown: black: grey brown/fair to worn exterior, very worn interior.
Feature 84, context 93
- P10 One very worn sherd, apparently belonging to a base angle, similar to, but probably not from the same vessel as, P17/FS:4/orange: dark grey: orange/worn to very worn.
Feature 84, context 93
- *P11 One rim sherd of a vessel with a slight shoulder, and a rim diameter of 12cms/FS:3/grey-brown surfaces/fair.
Feature 85, context 102
- P12 One rim sherd, possibly of the same vessel P11/FS:3/grey-brown surfaces/fair.
Feature 85, context 102
- P13 Two rim sherds, almost certainly belonging to the same vessel as P11/FS:3/dark grey-brown: black: brown/fair.
Feature 85, context 102
- *P14 One rim sherd of a vessel with an irregular upright rim/U:1/pale grey-brown: black: dark grey/fair.
Feature 85, context 102
- *P15 One rim sherd of a vessel with a rim diameter probably in the range 10-14cms/dark grey throughout/fair.
Feature 85, context 102
- *P16 One rim sherd of a vessel with a rim diameter greater than 20cms/FS:4/pale brown: dark grey: pale brown/fair to worn.
Feature 85, context 102
- P17 One base-angle sherd/FS:4/pale orange exterior and under-side of base: black: dark grey/worn.
Feature 85, context 102

THE FLINT (Fig 7)

DAVID MAYNARD

A total of 1124 flint artefacts were recovered from the Neolithic and Bronze Age pits. Most of the flint, with the exception of that from pit 85, was very patinated to a white colour, the material from 85 was a dull blue to white patina. All the flint was of a type obtainable from the upper chalk on which the site lies. 43.5% of the material was cortical.

TABLE 4 The Flint Industry

Context	25	28	34	84	85	Total
Primary Flakes	10	6	25	4	1	46
Secondary Flakes	11	20	79	12	5	127
Tertiary Flakes	42	31	128	20	12	233
Total Wasteflakes	141	206	539	116	90	1092
Cores	2	1	4	5	1	13
Core Rejuvenation						
Flakes			3			3
Scrapers			3		7	10
Worked Flakes			1			1
Utilised Flakes		1		2		3
Knife					1	1
Polished Axe			1			1
Total flint by feature	143	208	551	123	99	1124

Cores

The cores were classified according to the method used at Hurst Fen (Clarke 1960, 216).

The most common types are the A and B classes which would agree with other Neolithic sites. Core size was relatively large, averaging 118g and they were not heavily worked averaging 5 flakes removed per core. The longest flake scars are up to 59 mm long, while the most frequent groups of flake scar lengths are 30-40 mm and 40-50 mm, which agrees very closely with the data from the measurement of the waste flakes. Most of the cores retain a large amount of cortex, which together with their large size suggests a plentiful source of new material. Three core rejuvenation flakes were recovered.

TABLE 5 All Cores

	Class	A ₁	A ₂	B ₁	B ₂	B ₃	C	D	E	Total
Pit	25		1				1			2
	28			1						1
	34		1		1	1			1	4
	84	1	3		1					5
	85		1							1
Topsoil			1							1
Total		1	6	2	2	1	1	0	1	14

Waste Flakes

All unbroken flakes were measured to establish their length and breadth and the results shown on Table 6. The measurement for length was taken as the greatest dimension along the bulbous axis and that of breadth as the greatest dimension at right angles to the axis.

Both cortical and non cortical flakes showed broadly the same pattern; the commonest lengths for all flakes being 30-40 mm while the most frequent width is 10-30 mm. 13.6% of the waste flakes have a breadth to length ratio of 2:5 or narrower, classed as blades, while 22% of the flakes are broad and squat with a ratio of 5:5 or more. The flakes can also be categorised in the manner used by Savill (1981) to create a breadth length index by dividing the breadth into the length in millimetres and presenting the result to the first decimal place as in Table 7. On the whole many of the flakes are not as long as in many other early Neolithic sites e.g. Windmill Hill (Smith 1965), but the trend is however for longer flakes than at many later sites such as Barford Ring Ditches. (Howard this volume.).

Utilised Flakes

Four tertiary flakes have been described as utilised flakes. These could be classed as Smith type B (irregular chipping and spalling

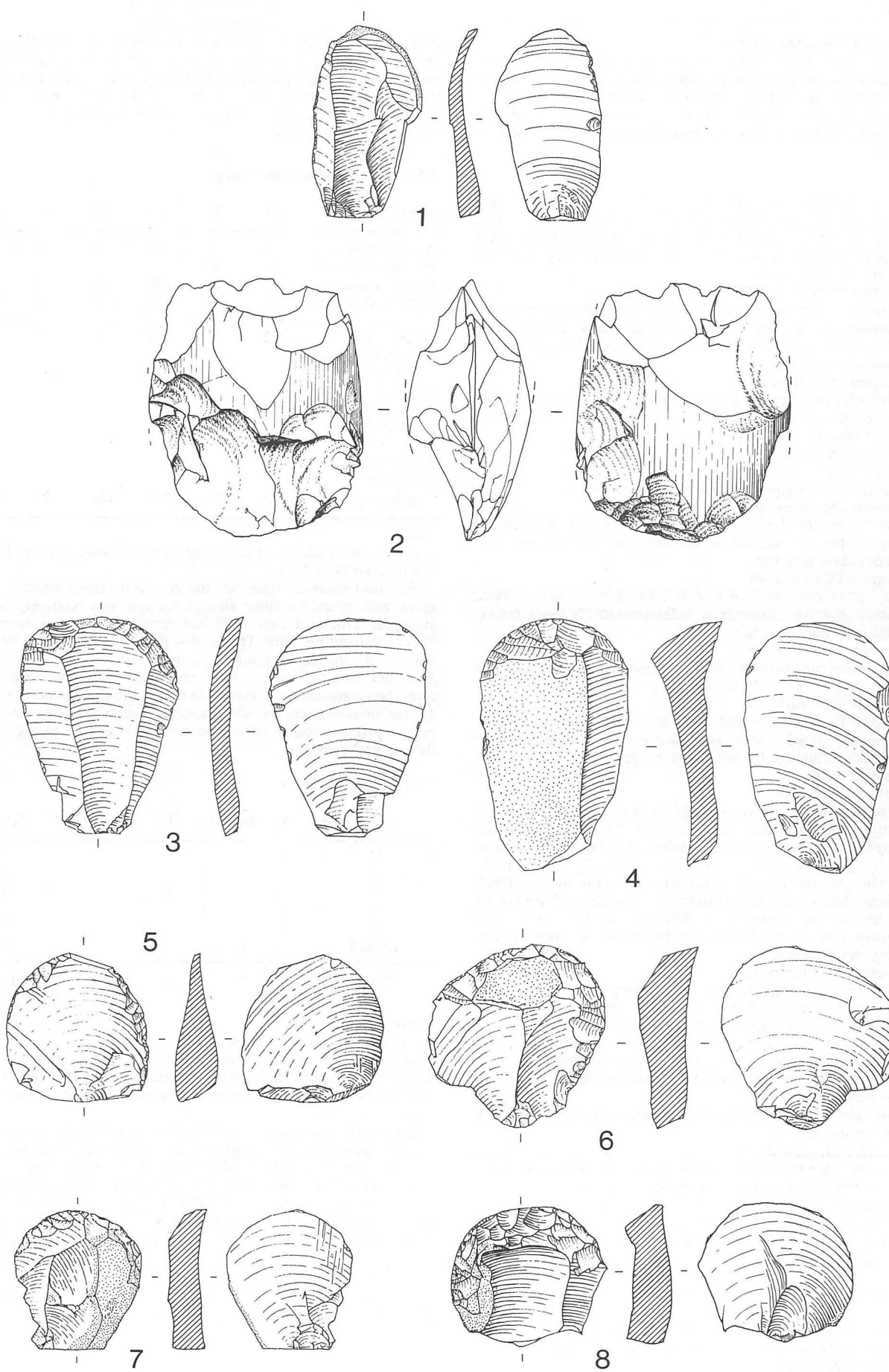


Figure 7 Lodge Farm: Flint, $\frac{2}{3}$ life size; 1, utilised flake, Pit 28; 2, polished axe fragment, Pit 34; 3-4, end scrapers, Pit 34; 5-8, round scrapers, Pit 85

resulting from use) (Smith 1965, 92). However this is purely the result of visual examination and need not be a true reflection of their origin.

Scrapers

Except for surface finds, all the scrapers come from either pit 34 or 85. The scrapers from 34 consist of 3 end scrapers formed on relatively long flakes with a deep white patina and convex scraping edges. Pit 85 contained a total of 7 scrapers, all except two (end scrapers) were round or thumbnail type with a blueish white patina.

Retouched Flakes

Two retouched flakes were found. One has a rough bifocal retouch along part of one edge up to the zone of cortex, the opposite edge has some slight signs of glass and possible edge utilisation.

Polished Axe Fragment

A much battered piece of polished axe was recovered from Pit 34, of heavily patinated white flint. This piece is possibly from near the butt. Some of its damage could be due to its use as an axe. It had a width of 57 mm at this point. After it was broken it seems to have been used as a core with several flakes having been removed.

TABLE 6 All Waste Flakes

Length	Number	Per cent
10-20 mm	8	1.9
20-30	93	22.5
30-40	126	30.5
40-50	103	25
50-60	48	11.6
60-70	20	4.8
70-80	12	2.9
80-90	2	.4

Breadth	Number	Per cent
0-10	5	1.2
10-20	119	28.8
20-30	158	38.3
30-40	74	17.9
40-50	45	10.9
50-60	7	1.7
60-70	3	.7
70-80	1	.2

TABLE 7 Breadth Length Index

Number of Flakes

	Primary	Secondary	Tertiary	Per cent	
> 0.5	—	2	2	1.5	Broad
0.6-1.0	15	21	6	16.3	Broad
1.1-1.5	13	43	68	48.2	Medium
1.6-2.0	10	15	34	22.9	Medium
2.1-2.5	2	5	14	8.1	Narrow
2.6 <	—	2	5	2.7	Narrow

DISCUSSION

This relatively small assemblage does not provide much information. There is, however, enough to indicate a Neolithic date with the predominance of relatively long flakes and the presence of a polished axe with scrapers on long flakes. Pit 85 seems to differ in the composition of flint and the nature of the tools and is likely to be later in date.

THE OTHER STONE

Quernstones The specimens were macroscopically examined by Mr Paul Ensom who identified possible sources for the stone.

1) Saddle Quern made from a large block of Gritstone $510 \times 240 \times 320 \times 170$ mm. The rubbing surface is an area of circa 300×300 mm gently dishd to the centre. The stone is a very gritty Sandstone/Gritstone common to the locality. From Pit 29 context

57 (Plate 4).

2) Saddle Quern made from a Sandstone boulder $360 \times 240 \times 170$ mm. The grinding surface is deeply convex. On the lower surface, there is a circular depression (80 mm in diameter, 30 mm deep) which is most likely to have been produced by pecking with another stone. There are no other similar depressions on the stone. The petrology of the stone resembles 1, but is less gritty. The Quernstone was found buried in the pit with the lower depression facing upwards. From Pit 84 context 94 (Fig 8).

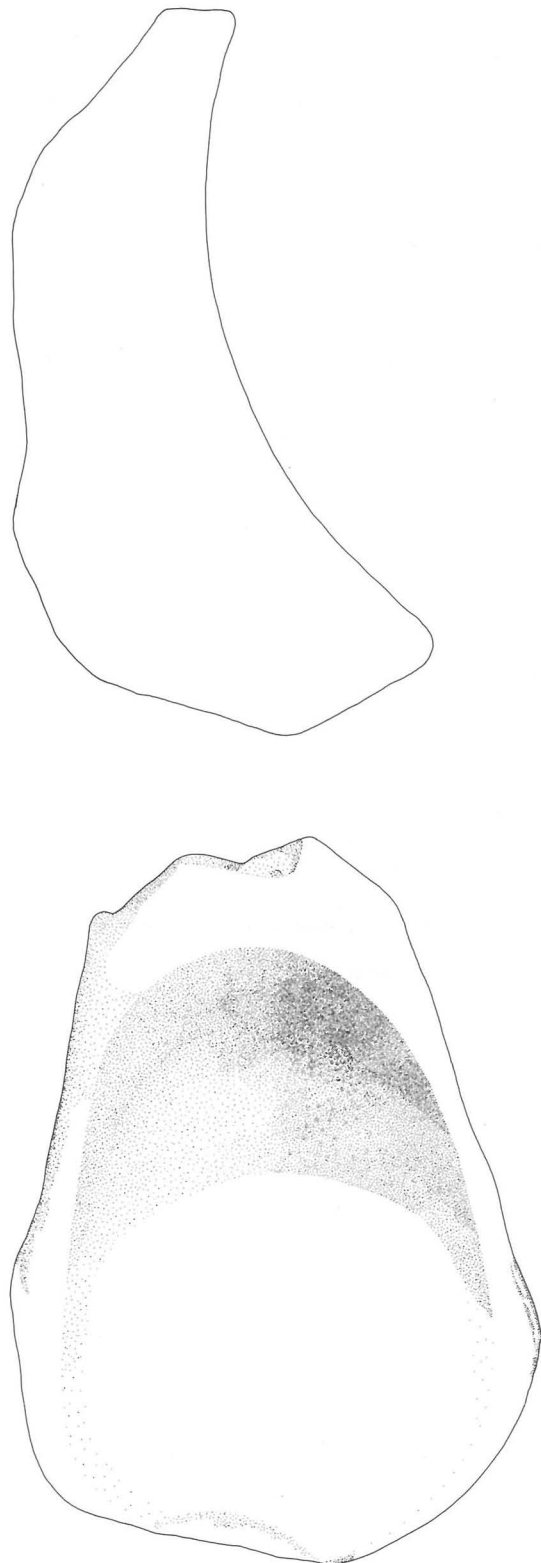


Figure 8 Saddle Quern from Pit 84, $\frac{1}{4}$ life size

Foreign stone (Not illustrated)

3) A block of quartzite, 110 × 130 × 70 mm, originating possibly from the Mendips or Avon region. From Pit 34 context 56.

THE ANIMAL BONES

MARK MALTBY

Excavations produced 142 animal bone fragments. The species represented are listed in Table 8 and the types of skeletal elements present are given in Table 9. The totals exclude a small amount of material from a Romano-British ditch. All the bones were poorly preserved and many had heavily eroded surfaces. Cattle fragments were the most commonly identified, although they were outnumbered by pig bones in pits 25, and 85. Most, if not all, of the unidentified large mammal fragments probably also belonged to cattle. Cattle bones have usually been the most commonly encountered in early Neolithic contexts on the limited number of sites in southern England that have produced material (Grigson 1982a: 306; Legge 1981).

Only a very small amount of sexing and ageing information was available. A maxilla from pit 34 belonged to a calf whose first molar was not in wear. The animal was probably younger than nine months old (Grigson 1982b). A cattle mandible from the same pit had a fully erupted tooththrow and belonged to an adult. A

TABLE 8 Species represented in Neolithic and Bronze Age Contexts

Species	Pit						Total Fragments
	25	28	34	50	84	85	
Cattle	1	4	19		4	1	29
Sheep	1						1
Pig	3			1		11	15
Red Deer	2	1	1		1	1	6
Roe Deer			1				1
Unid. Large Mammal		5	21		4	5	35
Medium-sized Mammal	2		3			24	29
Unid. Mammal		6	12			7	25
Unid. Bird	1						1
TOTAL	10	16	57	1	9	49	142

TABLE 9 Elements Identified to Species (Fragments)

	Cattle		Sheep		Pig		Red Deer		Roe Deer
	85	Oth.	Oth.	85	Oth.	85	Oth.	Oth.	
Skull frags.	1	1		1					
Antler						1	5		
Mandible		2		1	1				
Loose teeth		6		1	2				
Scapula				1					
Humerus				1					
Radius		3						1	
Ulna		1							
Os Coxae		3							
Patella					1				
Tibia		4			2				
Fibula					1				
Calcaneus		1							
Astragalus		1							
Metacarpal		3							
Metatarsal		1	1		1				
Metapodial					1				
1st Phalanx		1							
Lumbar verts.			1						
Sacrum		1							
TOTAL	1	28	1	11	3	1	5	1	

85 = Pit 85

Oth. = Other pits

TABLE 10 Cattle Measurements from Pit 34

Element	Measurements (mm)						
	Bp	Bd	Bdf	Dd	GLI	GLm	LA
Metacarpal	62.4						
Metacarpal		54.7	49.6				
Metacarpal		58.3	53.6				
Tibia		63.0		46.5			
Tibia		57.5		44.8			
Astragalus	46.6	45.0			65.3	61.2	
Os Coxae							66.2

All measurements follow von den Driesch (1976)

Bp = greatest breadth proximal

Bd = greatest breadth distal

Bdf = breadth at distal fusion point

Dd = greatest distal depth

GLI = greatest length lateral side

GLm = greatest length medial side

LA = length acetabulum

substantial portion of a pelvis (os coxae) in this pit probably belonged to a female, judging by the distinctive shape of the acetabular region (Grigson 1982b: 8).

The few cattle measurements are listed in Table 10. These all fit within the ranges obtained for domestic cattle on Neolithic sites in Wessex. None of the bones in the assemblage was of a size attributable to wild cattle (auroch).

The radiocarbon tests suggested that pit 85 may have been of later date than the remainder of the pits. It was possibly contemporary or even later than pit 4 within the ring ditch enclosure at Barford (Site 53.9). Both pits contained a faunal assemblage in which pig bones were the most commonly found and in which no bones of sheep/goat were positively identified. Presumably most of the 24 unidentifiable medium-sized mammal fragments in pit 85 also belonged to pig. Unfortunately, even including these, the assemblage was so tiny that it would be unwise to read too much into its results. Nevertheless, it seems possible that the exploitation of pigs may have become more important in the later Neolithic and early Bronze Age in southern England, either as a result of ecological change (Grigson 1982a) or because of cultural factors (Richards & Thomas 1984). However, we do require a much wider range of well-dated samples to supplement the limited evidence for this possible trend.

The pig bones from this site included a mandible from pit 34 in which the third molar had not erupted but the first two molars were in wear. This belonged to an animal that may have been about 18-24 months old at death (Bull & Payne 1982). No metrical analysis was possible on any of the pig bones but all probably belonged to domestic pigs. Identifications of red deer (*Cervus elaphus*) were made from several substantial portions of antler, which were found in five of the six pits excavated. Red deer antler picks were probably used to dig out the pits and some of these may have been subsequently discarded. The antlers in pits 85 and 34 both included the coronet, which provided evidence that the antlers had been cast naturally. The coronet from 85 had a maximum diameter of 78.9 mm. A fragment of roe deer (*Capreolus capreolus*) radius was found in pit 34. The only fragment identified as sheep came from pit 25 and consisted of the proximal half of a metatarsal. The absence or low numbers of sheep bones is typical of most Wessex Neolithic contexts.

THE ENVIRONMENTAL ANALYSIS

JOY EDE

Samples were taken from three of the pits for environmental analysis. These were floated and the dry flots examined under a microscope for carbonised seeds and chaff. Only very few seeds were recovered. These are listed in Table 11.

TABLE 11 Carbonised seeds

Feature	Context	Contents
28	49	1 <i>Triticum</i> sp., 1 cereal fragment, some probably modern <i>Chenopodium</i> sp.
34	56	some cereal indet., few probably modern <i>Chenopodium</i> sp.
85	102	few frags. cereal indet.

CONCLUSION

The intensity of prehistoric activity in the general vicinity of Badbury Rings is referred to in the report of the Ring Ditches at Barford Farm (Howard this vol.), and the area centred on Lodge Farm is no exception.

The earliest features on the site are a group of five pits which form a discrete unit south-west of the Roman road. These features, 25, 28, 29, 34 and 84 are dated, on the grounds of the pottery and the general finds assemblage, with more or less certainty, to the earlier Neolithic. In the case of 25, 28 and 34 there is clearly no problem (cf. the pottery) and Ros Cleal is surely correct in suggesting the likelihood that the, possibly, Middle Bronze Age sherd recovered from 84 is intrusive. 29, which only contained a Saddle Quern, cannot be dated closely, but given its location and the absence of any evidence to the contrary is likely to be contemporary with its surrounding features.

The pits conform both in their size and shape and in the general occupation debris recovered from them to other excavated pits of this period (Field *et al.* 1964). The almost total absence of carbonised seeds is somewhat surprising but the recovery of two Saddle Querns suggests that cereal cultivation was practised, and the bone assemblage points to a mixed farming economy in which cattle and pig predominate.

The absence of any evidence for structures is hardly surprising: irrespective of the arguments concerning natural chalk dissolution (Groube and Bowden 1982) the site has been subject to such deep ploughing, particularly in recent years, as to effectively destroy any but the most substantial of features.

This site adds to the small, but increasing, number of such pits known in the Wimborne area (Cleal, this report) and the discovery of both this site and the other recently discovered group of pits at Moortown Aerodrome serve only to confirm the dichotomy between the existence of long barrows and causewayed enclosures on the higher ground of the chalk downlands and these earlier Neolithic domestic settlements which appear to be confined to the river valleys and the coastal plain (Barret *et al.* 1981).

Middle Bronze Age activity on the site is attested to by the presence of three sherds of pottery likely to belong to the Deverel-Rimbury tradition, if not by any features. One of the sherds, as has already been seen, is likely to be intrusive in the earlier Neolithic pit 84 and the remaining two, from pit 85, are thought to be residual as the bulk of the pottery suggests a Late Bronze Age date for this feature. Feature 85 is, frankly, odd but given the fact that both Middle and Late Bronze Age pottery are thought to have been identified from the same context as the antler which provided a radiocarbon determination of cal 1900-1710 B.C. it would seem best not to place too much reliance on this determination for dating the feature or its contents. The nature of the feature itself is also enigmatic and it is hard to envisage a practical function for a pit of this shape.

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illustrations, to the National Trust, particularly Tim Moore, Martin Papworth, and David Smith for all their help and cooperation, to Frank O'Hare who not only surveyed in the site but also, in a quiet moment, drew the Quern from Pit 84, to Mr Purchase, the tenant of the site, for his interest and cooperation and, finally, to my colleagues Sally Howard and David Maynard who did most of the work.

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A Double Ring Ditched, Bronze Age Barrow at Barford Farm, Pamphill

SALLY HOWARD

with contributions from

DAVID TOMALIN, DAVID MAYNARD, GILLIAN STROUD, MARK MALTBY and MIKE ALLEN.

SUMMARY

This report describes the excavation of a double ring ditched barrow site on the Upper Chalk downlands within the parish of Pamphill to the north-west of Wimborne Minster, Dorset.

The earliest feature on the site was a circular pit containing Grooved Ware pottery deposited with a range of other archaeological materials which have been dated to 4180 B.P. \pm 90, (HAR 9596). This Late Neolithic feature lay close to an oval pit which contained the crouched inhumation of a child, dated to 3580 B.P. \pm 80, (HAR 9819). Both these pits were cut, along with four further features, into the central part of site, namely an area enclosed by the inner of the two ring ditches. A primary layer within this inner ditch has been dated to the Early Bronze Age, 3639 B.P. \pm 120 (HAR 9597). The presence of a Late Neolithic deposit, seemingly unconnected to the subsequent funerary activities on the site adds to a body of data from Wessex, of Bronze Age barrows centred over earlier (Grooved Ware) focal points. Early development of and continuity in the use of this particular area of land is evidenced by the site's mollusc assemblage, sampled from the ditch fills.

The radio carbon dates indicate that the inner ring ditch and the primary burial were broadly contemporary, evidence which would support the view that the inner ditch was cut to delimit the site and to quarry chalk rubble to be used, characteristically, in a central mound or ring bank. At a later date a more substantial, but concentric ditch was cut beyond the original focus. No upstanding part of the site survived, but it is thought that this outer ditch, particularly an extensive recut, on its north side, served to further enlarge the barrow mound. Unfortunately the absence of diagnostic material from the other undated pits and hollows on the site means that any associations between these features and the outer ditch cuts are conjectural.

The destruction of the site appears to have occurred in antiquity; ceramics from the upper fill of the later ditch suggest that the site was flattened in the third or fourth century A.D. However, given the extremely long agricultural history of the area, damage to the site may have occurred any time in the last 3000 years.



Plate 1. View of site from the south-west.

INTRODUCTION (FIG 1)

The area of the parishes of Pamphill and Shapwick was known to be of archaeological interest (RCHM 1975 44-53, 57-64). The sites of over 50 ring ditch/barrows, have been traced, with particular cemeteries located between 1 to 2 km north and north-west of the excavated site, Fig. 1, A. This pattern is augmented by a number of seemingly isolated sites, recognised primarily from aerial photographs. The distribution of known ring ditch/barrows may have

been affected by the almost continuous cultivation that has occurred in this area since pre-Norman times, notably in the form of the open strip fields, the probable 'North' and 'South' fields of the 'Kingston Manor', (Smith 1988), but also by intensive Iron Age and Roman land use in the preceding centuries. Consequently, the earthworks of many of these sites have long since been flattened and the material forming the mounds scattered in the surrounding fields.

The barrow at Barford was not traced on aerial photo-

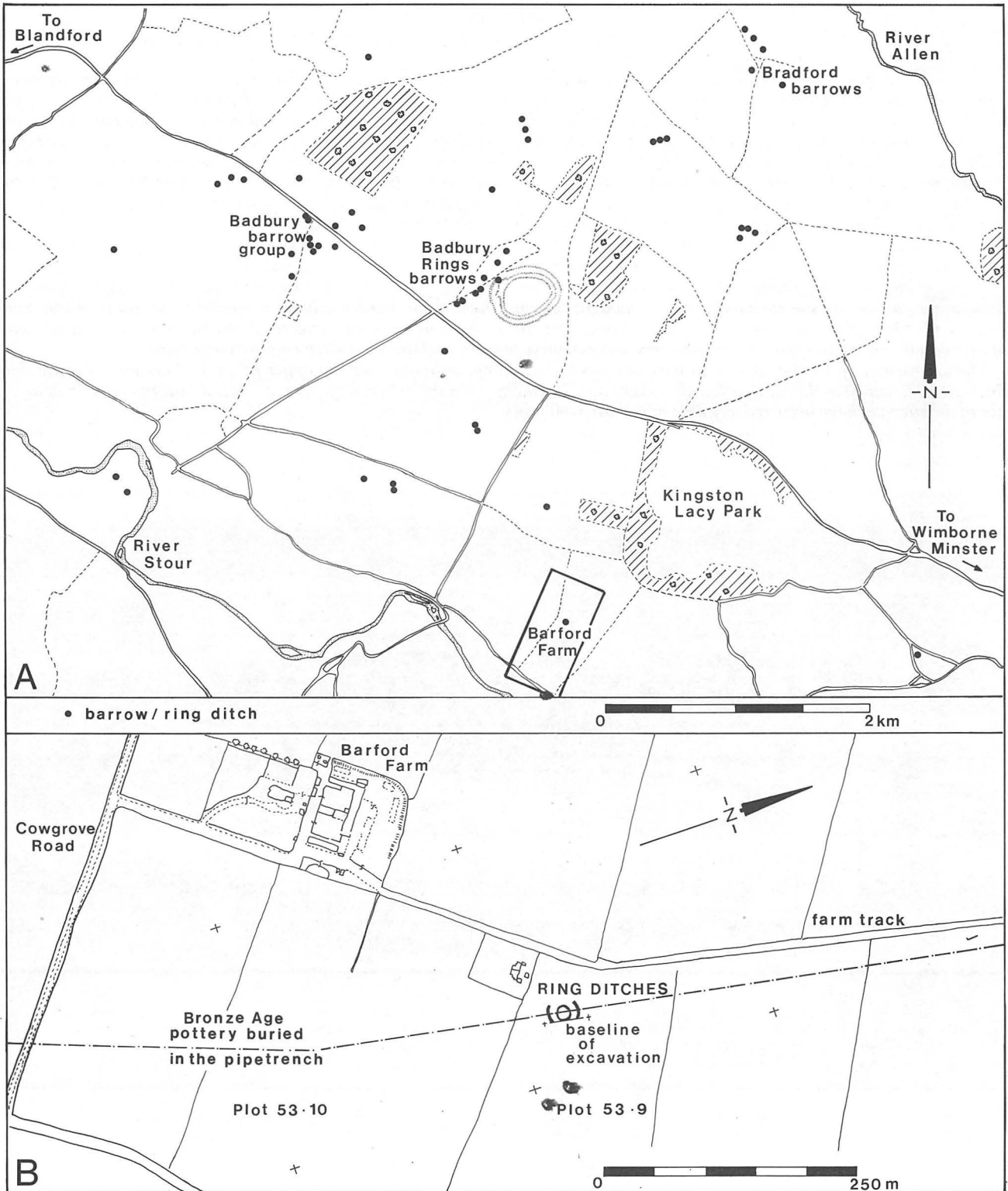


Figure 1. a) The distribution of barrows and ring ditches in the parishes of Pamphill and Shapwick (source RCHM 1975).
 b) The location of the site at Barford Farm.

graphs, nor was it evident as a specific concentration from the material collected in the fieldwalking assessment. Geophysical survey carried out in the autumn of 1987, to assess the potential of this area, also failed to pinpoint the site. The archaeological features were, however, revealed in June 1988 when the shallow plough soil was removed from part of the south facing slope along the Stour Valley in advance of pipeline construction.

Location and site strategy

The site is on the Upper Chalk at ST 9669/0055, 32 m above sea level and 300m to the north-west of Barford Farm, Fig. 1, B. The ring ditches were on a false crest in the slope, which was reasonably flat to the north, but fell away by more than a metre on the south side of the site, Fig. 2, A and B. The field is currently cultivated for maize, and intensive ploughing of the area over the centuries has exaggerated this trend in the slope and eroded the downslope features of the ring ditches to a greater degree than the upslope side of the site. This situation is recorded in the site profile and illustrated ditch sections, Fig. 2, B and C.

Excavation of the ring ditches and associated internal features was carried out during the beginning of July 1988 and followed on directly from the work at another site exposed by the pipeline, the Iron Age settlement adjacent to Sweet Briar Drove, some 500m to the north, (Maynard, forthcoming). After cleaning, the inner of the two ring ditches, 13 m in diameter, could be seen almost entirely, but the fringes of the outer ditch lay under the top soil heap to the west and the cropped field to the east, Plate 1. Whether the outer ditch made a complete 27 m circuit, or was broken at some point on its diameter has not been established. It was clear, however, that the pipetrench would cut through the centre of the ring ditches and disturb practically all the internal features, Plate 2.

A grid was established over all the visible archaeology, namely 95% of the inner ditch and 40% of the outer ditch, Fig. 3, with the north/south axis parallel to the pipeline easement fence: true north differed from this by just 9°. The strategy for excavation was to anticipate the pipetrench and remove all archaeological deposits from a 5 m zone running through the middle of the site. In this way profiles could be recorded from the two ring ditches on both the north and south sides of the site. Within the ditches this 5 m strip was divided into an east and a west half, each 2.25 m across, leaving a temporary baulk that would allow the profile most central to the excavated deposits to be drawn and sampled for molluscs (Allen, this report). In addition, five pits which lay within this central 5 m strip and a further feature cut through the top of the inner ditch were excavated.

THE EXCAVATED FEATURES

LATE NEOLITHIC ACTIVITY PRE-DATING THE RING DITCHES

Pit 4

Pit 4 was a circular, straight-sided, flat bottomed pit, 1.18 m in diameter and cut .6 m into the chalk bedrock, situated 3.5 m to the north of the site's centre point, Fig. 3., and Fig. 4, A. A thin layer of chalk silts had accumulated at the very bottom of the pit and against the south part of the side wall, but it seems likely that the feature was infilled fairly rapidly. Between this chalk wash and a cemented chalk capping lay a series of dumped fills, silty in character which were reasonably evenly spread throughout the pit. The deposits were not divided by marked tip or silt lines but seemed to have originated from the south side of the feature.

These deposits, which filled the body of the pit, context 24, were composed from a fairly homogeneous soil matrix, a silt loam, differentiation between parts of the fill stemmed from the comparatively sorted nature of the finds which had been crowded into this densely packed pit, Plate 3. It was possible to distinguish two more particular layers, one characterized by a high concentration of pottery, 39, while another layer, 41, was aceramic but contained much daub and charcoal, (Tomalin, this report) Animal bones (Maltby, this report) and flint both worked and burnt (Maynard,

this report), were contained throughout the pit. The feature was sampled for environmental purposes, and some of the animal bone used for radio-carbon determination. The nature, date and possible significance of these finds will be discussed in the relevant specialist reports. Material excavated from pit 4 is illustrated in Figs. 5, 8 and 9.

QUARRYING OF THE INNER DITCH

The Inner Ditch, contexts 14 and 18

In plan the inner ditch was circular with a diameter of 13 m. A steep-sided profile was apparent from all excavated areas of ditch which was, on average, 1.38 m wide and .70 m deep. The straight edges were cut at an angle of 25°, down to a flat base .50 m wide.

Three different fills were distinguished along the northern arc of the inner ditch, but the upper of these deposits had, if ever present, been truncated from the southern profiles. The lowest .40 m of fill was uniform, composed almost completely (90%) of clean lumps of blocky chalk and more grainy rounded chalk silts. In the north-western part of the ditch three discrete areas of charcoal about 50 mm in diameter and .10 m apart, were recorded within the lowest .10 m of this otherwise undifferentiated primary deposit. This charcoal was sampled for a radio-carbon determination, as it seemed likely that the material would provide a date close to the initial digging of the ditch. A secondary layer filling the next .25 m of the ditch was a more loamy version of the lowest fill, with about 40% of the bulk comprising small rounded fragments of chalk. Lumpy flint nodules and waste flakes were excavated from this layer. The uppermost and tertiary layer was a friable soily loam which contained very little chalk (5-10%) and pieces of worked and burnt flint.

The illustrated sections of the inner ditch, Fig. 2, C, suggest weathering took place at the top of the profile, but the straightness of the lower edges and homogeneity of the lower fills suggests that the whole profile, especially the lowest .40 m of the ditch had filled up, or had been backfilled very quickly, Plate 4.

PRIMARY FEATURES OF THE BARROW

Features 8 and 9

Two oval pits, contexts 8 and 9 lay slightly to the east of the site's centre. The two features were similar in dimension being respectively, 1.04 m and 1.25 m long, and .7 m and .8 m wide, Fig. 3. The

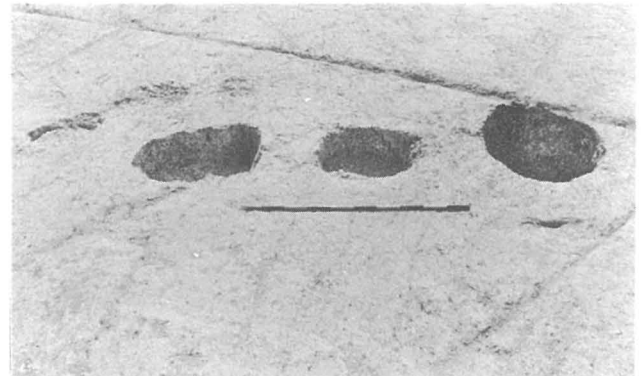


Plate 2. Features cut into the chalk, within the inner ring ditch.

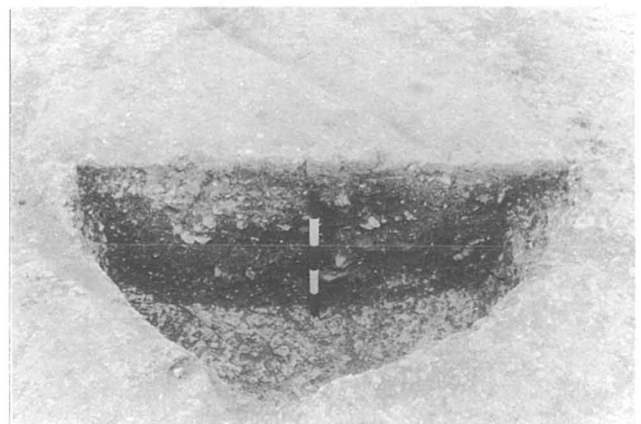


Plate 3. Late Neolithic deposit in pit 4.

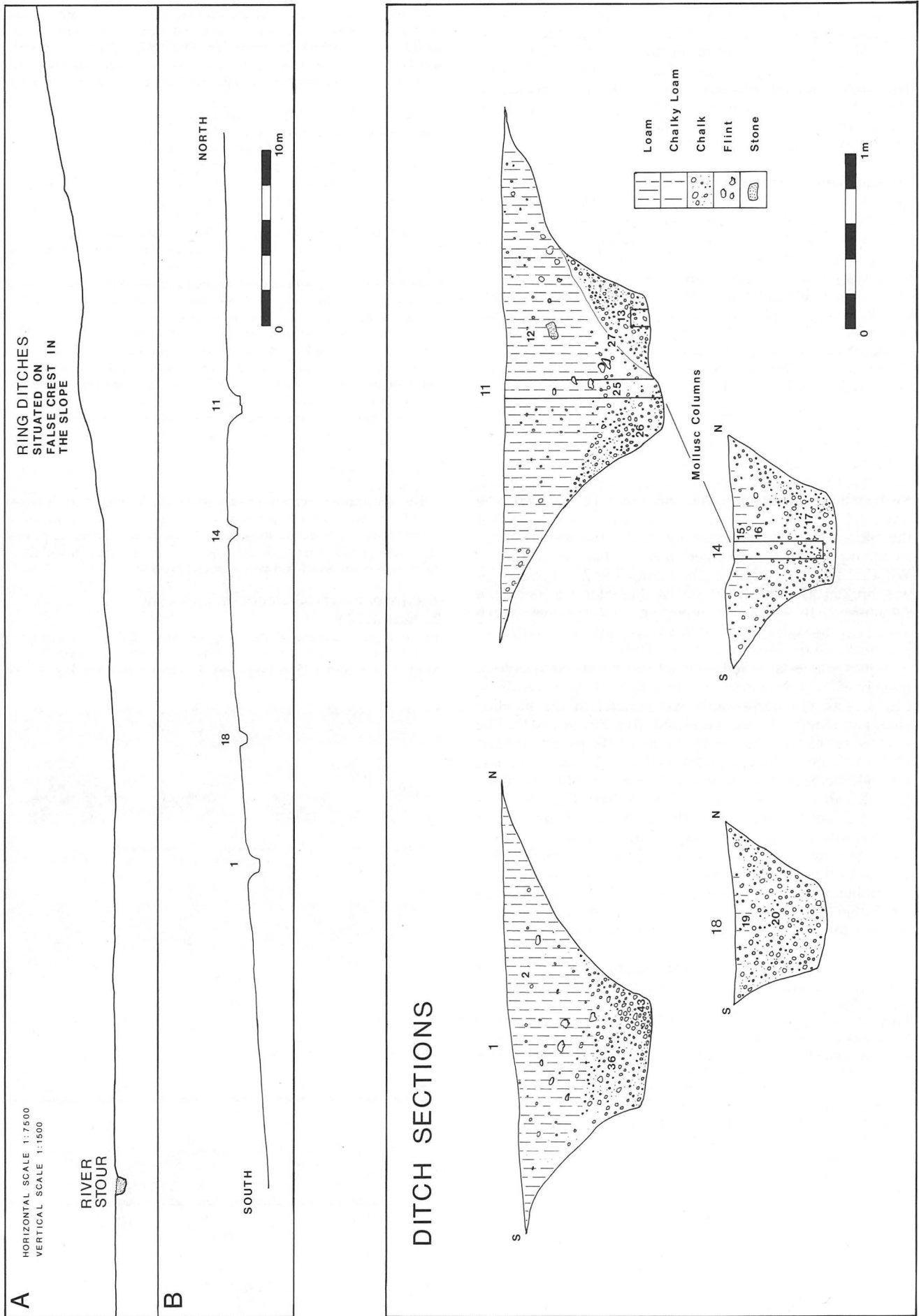


Figure 2. a) Profile of the southward facing Stour Valley slope. b) Profile of Barford Farm ring ditch. c). Sections of the inner and outer ring ditches.

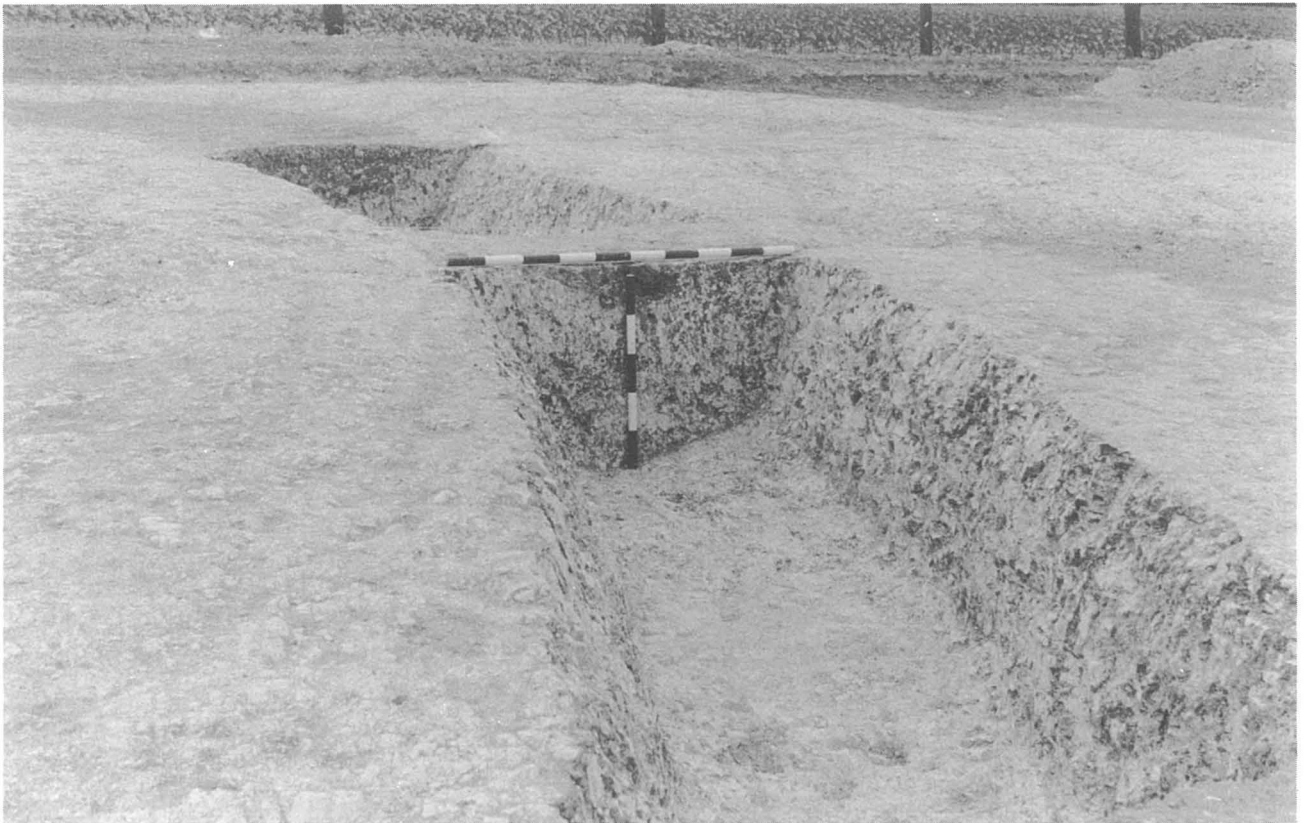


Plate 4. The inner ditch.

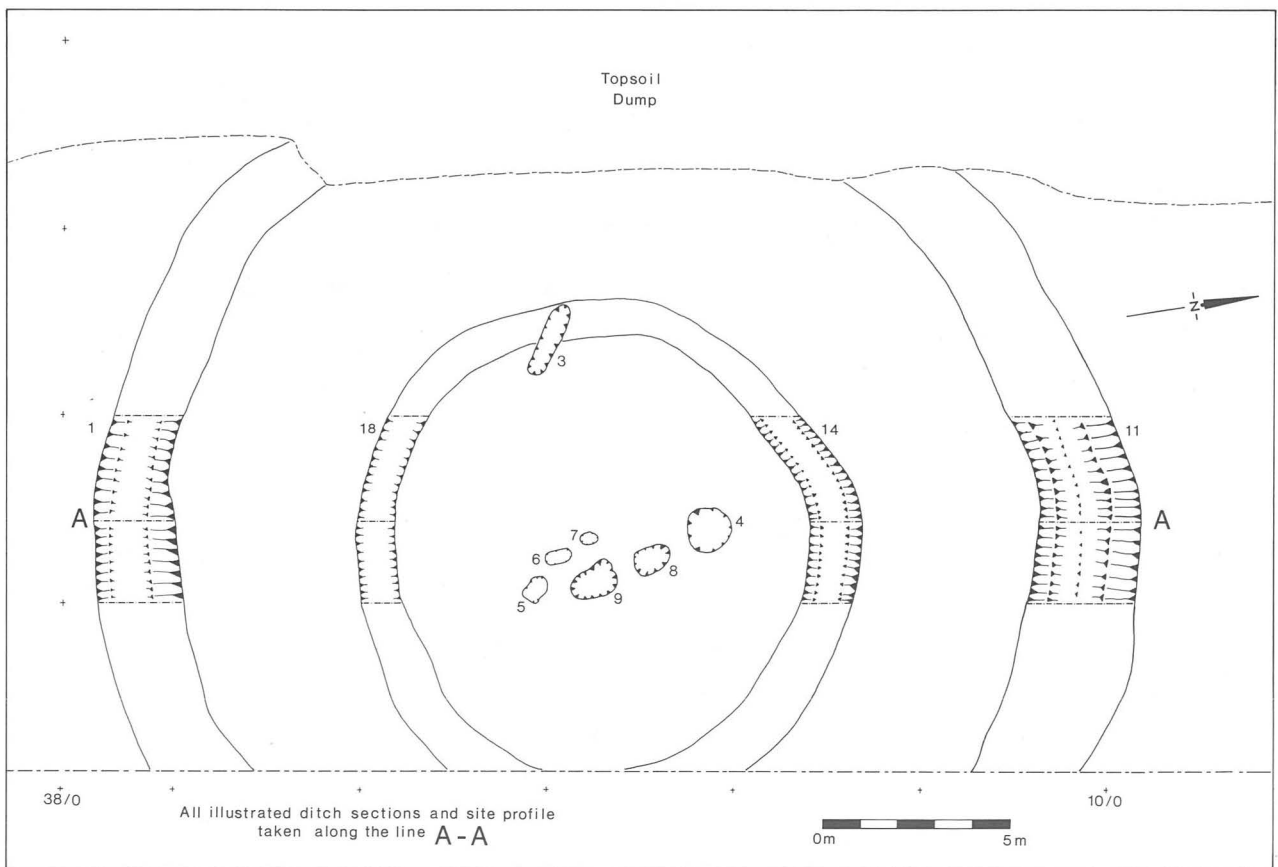


Figure 3. Plan of the excavated features.

pits were straight sided and had been cut to the depths of .33 m and .35 m into the chalk bedrock; both were flat floored, Fig. 4. A. Both pits had been backfilled with compact, comparatively clean chalk silts similar to the primary deposits in the inner ring ditch. Pit 8 contained no finds and has not been dated. Unidentifiable fragments of cremated bone were excavated from the upper fill of pit 9 and the crouched inhumation of a child's body lay in a pocket of grainy chalk silts at the base of the pit, Fig. 4. B and Plate 6. This material is discussed in Stroud, this report. After the skeletal analyses had been carried out the bone was submitted for a radio-carbon determination. A small sample of bone was sent to University College, London for research into the condition and preservation of human bone in different soil types, (Bell, this report).

FURTHER EXTENSION OF THE BARROW

The Outer Ditch, contexts 1 and 11

In plan the outer ditch was circular and concentric to the inner ditch with a diameter of 27 m. On excavation two phases of activity were observed in the outer ditch; in that the whole northern arc of the ring ditch had been recut while the southern side had silted up naturally, without obvious intervention by man.

The first cut of the outer ditch was straight sided, as is shown by the lower profile of the ditch, preserved behind the earliest silting which would suggest that the edge was angled at 25°; that the first cut had a wide flat base is also apparent, Fig. 2. C. Given the recutting along the northern arc, the southern arc of the outer ditch may be assumed closest to this original profile. The ditch has, however, weathered considerably, a shoulder or lip being evident along much

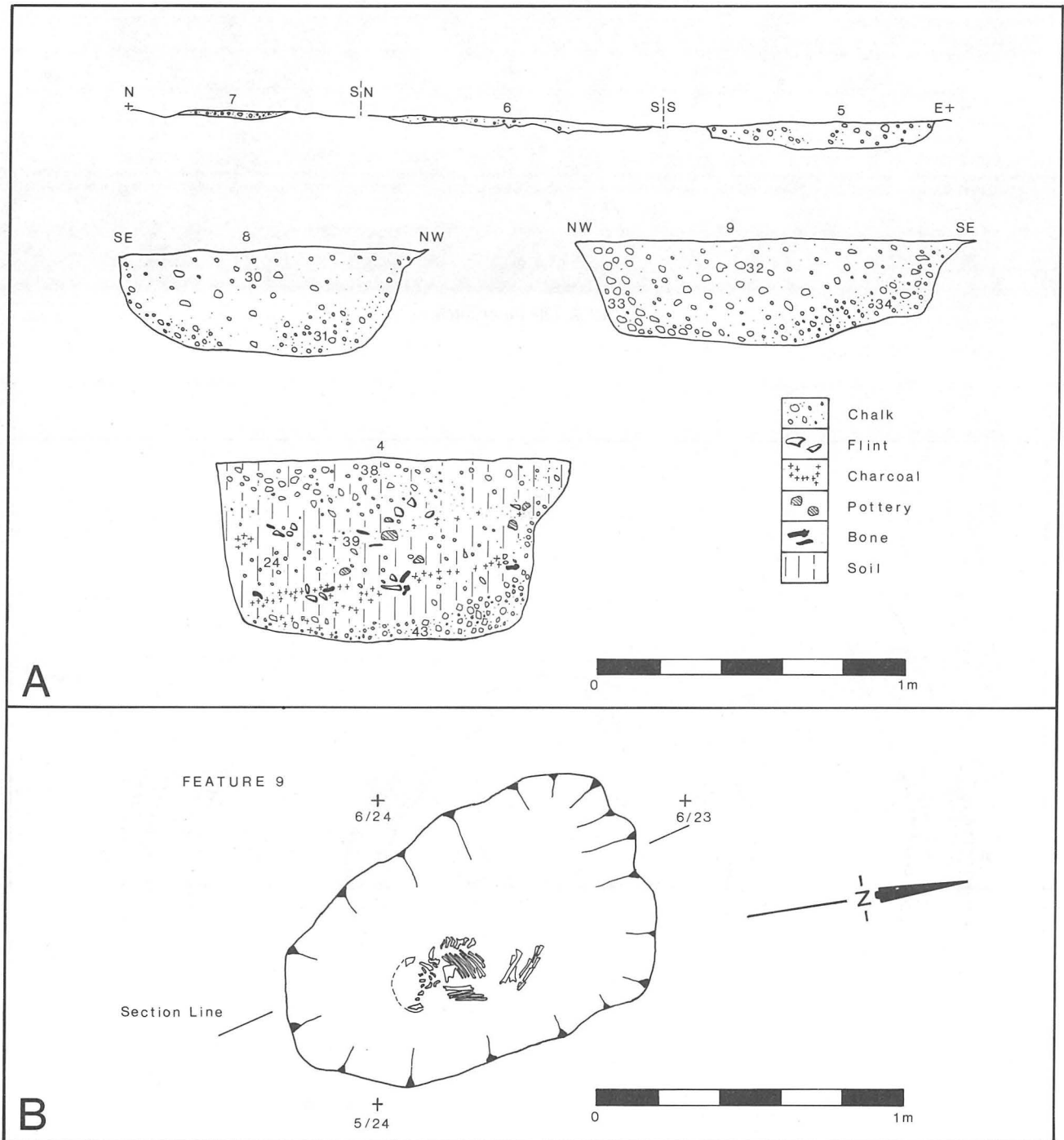


Figure 4. a) Sections of the internal features. b) Plan of pit 9 containing an infant burial.

of the ditch's uppermost edge. This profile occurred more commonly, but not exclusively, along the external edge and may be attributable to early frost attack. Weathering of a more gradual nature resulted in a comparatively graded, almost domed, internal ditch face. This weathered berm face was clear in both the northern and southern arc of the ring and can be interestingly compared to the ditch's steeper external face. The overall width of the ditch was 2.3 m and the depth, prior to recutting, between .8 m and .85 m.

There was no consistent asymmetry in the silting patterns within the outer ditch, but the primary chalk silts could be distinguished into two types. A blocky deposit, context 43, found chiefly against the interior edge of the ditch which seemed to originate/have fallen from the interior part of the site. A more weathered type of chalk silt, contexts 36 and 13, was situated in the central and outer side of the ditch profile. Little or no stone/flint was recovered from these primary layers, which filled the lowest .35 m in the southern arc of the ditch, and probably represented a point at which the early silting processes stabilized.

RECURTING OF THE OUTER DITCH

Context 11

All excavated areas of the ditch along the northern arc of the outer ring demonstrate that the outer ditch had been recut to create a steep v-shaped profile close to the interior side of the original ditch. Comparison with the southern arc of the ring would suggest that the recut was not designed to greatly enlarge the ditch but rather to re-establish the prominence of the ditch or its associated earthworks. The recut was no wider at the top than the first ditch, nor were the primary deposits totally cleared out, for example part of the original fill, the chalk silt, 13, remained intact along the exterior edge of the ditch. Four diagnostic pot sherds were recovered from this silt, and form the basis of some chronological discussion. The base of the recut was apparent as a narrow flat step .2-.3 m wide, where fresh chalk had been removed up to .10 m below the original depth of the ditch, Fig. 2. C., Plate 5. The recut weathered, and rounded chalk silts accumulated within the new ditch profile, contexts 25 and 26, this secondary material was derived primarily from an area on the interior side of the ditch. Reconstructible ceramics were excavated from this central layer of the outer ditch.

In the top .45 m of the ditch, lay a distinctly different deposit of compact clay loam, contexts 2 and 12, within the southern and northern arcs of the ditch respectively. This soil contained only a small quantity of chalk (10%) and was characterized by a substantial quantity of waste flint and further ceramic evidence. These

tertiary fills of the ditch were mixed and without distinct layers and are considered to be, at least partially, the remains of any pre-existing mound or ringwork, redeposited in the upper ditch when the site was levelled.

A few abraded fragments of animal bone were excavated from the various layers within the outer ditch, but unfortunately the quantities were insufficient for dating purposes.

UNPHASED FEATURES CUT IN THE CENTRAL AREA OF THE RING DITCHES

Features 5, 6, and 7

Three shallow scoops were located in the central area to the south and west of the primary burial in pit 9, Fig. 3. and Plate 2. Feature 5 was .8 m × .6 m across and 90 mm deep with steep straight sides and an even flat floor, similar to pits 8 and 9. Feature 6 was .8 m × .5 m across and just 33 mm deep, with an irregular undulating floor and poorly defined edges. Both the features were filled with a weathered chalk silt from which no finds were retrieved, even after flotation.

Feature 7 represented all that remained of a circular cremation pit, with a surviving diameter of .15 m. The feature was located at the exact centre point of the ring ditches, and existed to a depth of 33mm. Unlike feature 6, it had a flat floor and contained several pieces of burnt bone.

Feature 3

Feature 3 which lay to the south west of all the other cut pits and was different in style being 2 m long and .5 m wide, surviving to a depth of 40 mm. There was no evidence as to the function of this elongated hollow which was filled with a friable loamy soil containing small chalk fragments, the occasional fleck of charcoal but produced no finds. The feature could not be attributed to any specific phase but was cut through the top of the inner ditch. Feature 3 did have an approximate east to west orientation, which was not displayed by any other element on the site.

BRONZE AGE MATERIAL BURIED IN ADJACENT COLLUVIUM. PLOT 53.10

During the construction of the pipeline a featureless spread of archaeological material extending for 25 m, was located in the pipetrench below chalk colluvium .5 m thick and situated some 350 m downslope from the ring ditches. Several pieces of diagnostic pottery were retrieved from this apparently redeposited material, which might have originated from a grave within the Barford Farm

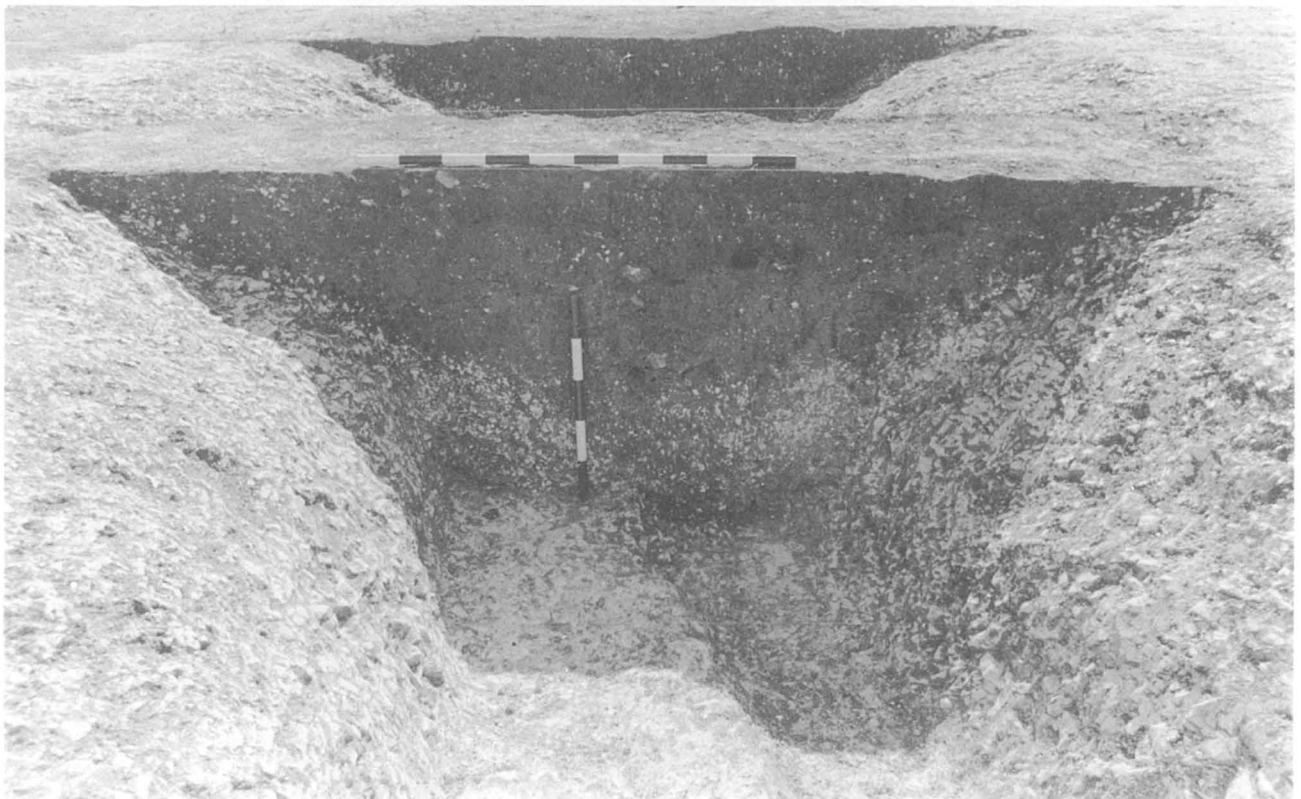


Plate 5. The recut of the outer ditch.

barrow, but could equally be derived from another ploughed out site with the same slope catchment.

THE FINDS

THE LATE NEOLITHIC AND BRONZE AGE POTTERY FROM BARFORD FARM AND ITS CULTURAL IMPLICATIONS

DAVID J. TOMALIN

DESCRIPTION OF THE POTTERY FROM RING DITCH PSP 53.9.

The Neolithic pottery and daub from Pit 4

Grooved Ware A total of 33 sherds (230 g) of Grooved Ware was recovered from infill layers 24 and 39 in Pit 4. The sherds in the two layers include some fragments which seemingly belong to a single vessel and accord with the general evidence that the pit was briefly filled in a single event. A conjectured reconstruction of this vessel is illustrated in Fig. 5.

All Grooved Ware sherds from the pit are tempered with some 15% comminuted shell with a particle size mode generally set around 3.5 mm. This tempering medium is held within a soft dark grey reduced clay matrix (5YR 4/1). The reconstructed vessel [sherds 39.1-39.6 and 24.1] is reduced throughout and displays common flat shell fragments on its internal and external surfaces. It is decorated with an indeterminate number of horizontal U-scored grooves, each approximately 2 mm wide. The rim, whilst not precisely analogous, is best compared with form 13 of Wainwright and Longworth's classification (1971).

Other Grooved Ware sherds within the pit include a thick-walled vessel [24.3] bearing some external reddish yellow oxidation (7.5 YR 6/6). A rounded-rim sherd [39.7] with similar finish may possibly belong to the same pot. Two rim sherds [39.8 and 24.3], differentiated by reduced and oxidised external finishes, may represent bevelled rim pots. A ridged and faceted sherd [39.3] with its internal surface missing may possibly represent a vertical pinched cordoned detached from a Durrington style urn.

Daub A total of 2.065 kg of daub was recovered in fragments from infill layers 24, 39 and 41 within the pit. Of this quantity 42% by weight was recovered from the aceramic layer 41. The daub is

composed of local chalk marl and due to its differential exposure to heat can be divided into two variants. Some lumps comprise a soft very dark greyish brown reduced matrix tempered with some 20% rounded chalk particles with a particle size mode of 6mm. The second variant is similarly tempered but displays a reddish yellow clay matrix (7.5 YR 8/6) showing no clear evidence of thermal discoloration. The presence of both colours on one fragment from layer 24 confirms these variations to be the result of differential heating of a single mass.

Whilst the daub pieces are friable and extremely fragmentary, sufficient survive to show that some of this material was compressed on to a flat bed to form a layer some 20 to 30 mm thick. Fine striae on one fragment suggest hand wiping. No organic casts can be observed in the clay and no evidence for the use of the daub can be detected.

The Bronze Age pottery and its fabric groups

Fabric Group A Twenty-five grog tempered sherds signify the presence of a number of vessels with textural characteristics compatible with the form 3 variant of the British bioconical urn ceramic tradition. This identification is based on the formal attributes of two sherds, one bearing a trace and the other a possible trace of a shoulder cordon [2.2 and 2.3]. A single rim sherd [2.1] is also present. In general, the hardness of the sherds favour a form 3 attribution for all the fragments but this cannot totally exclude the possibility that some could belong to the Food Urn ceramic tradition which displays a similar but generally slightly softer Fabric. All sherds are oxidised on the external surface; the effect penetrating to a depth of 10 to 50% of the thickness of the body wall. Fabric A occurred in layers 2 and 13 of the outer ditch.

Fabric Group B Two body sherds [2.26 and 2.27] from the upper fill (layer 2) of the outer ditch represent a reduction fired, grog tempered urn containing 15% fine oxidised grog with a particle size mode of approximately 1mm. Some 3% angular calcined flint of the same size is also present. The matrix is very dark grey to black throughout. These tempering attributes favourably resemble several Dorset biconical urns such as those from Bloxworth G2 or G3 (Tomalin 1983, DB5); Long Criche G7 (*ibid* DB12); Bere Regis G46c (*ibid* DB 33); Dorset Downs (*ibid* DB44); Chaldon Herring G24 (*ibid* DB 55) although no precise match can be made.



Plate 6. The infant inhumation in pit 9.

Fabric Group C This group comprises flint-tempered urn sherds displaying a reduced, poorly fired friable and laminating fabric containing 5 to 7% angular calcined flint with a particle size mode generally set around 2.5 mm. The matrix is dark reddish brown (5 YR 3/3) and the external and internal surfaces can be very slightly oxidised to yellowish red (5 YR 5/6). The sherds include a rim fragment [13.3] and base sherds of at least two vessels. The textural characteristics and the rim form are all comparable with Dorset bucket urns. The sherds of fabric C occurred in layers 13 and 25 representing the primary and secondary fill of the outer ditch.

Fabric Group D This group is represented by a single body sherd of a flint tempered vessel bearing eight tooth comb point impressions [13.2] found in the primary fill of the outer ditch. The matrix of the sherd is black with a superficially oxidised reddish yellow exterior (7.5 YR 7/6). The interior is also superficially oxidised. The fabric contains 3% angular calcined flint with a particle size mode of approximately 2 mm.

Fabric Group E A miscellaneous group of 4 unclassified sherds of indeterminate date from the upper fill (layer 2) of the outer ditch.

Fabric Group F A heavily flint tempered ware containing some 15% angular calcined flint with a particle size mode of 2 mm is present in the upper fill (layer 2) of the outer ditch. The sherds represent the lower portion of a thick-walled urn with sagging body [2.31]. The matrix shows a hard dark fabric giving way to a superficially oxidised exterior. The textural characteristics of this vessel and its thick sagging form are compatible with a number of Later Bronze Age bucket urns which have been noted east of the Dorset Stour by ApSimon (1962, 2, 320-1) and Ellison (1975, 186-193).

The petrology of the fabric groups

Thin sections of the Grooved Ware sherds from pit 4 at ring ditch PSP 53.9. were prepared and examined by Dr. D. F. Williams, (thin sections of Grooved Ware from a further pipeline site, 52.6, were prepared and analysed on the same occasion, see Addison, this volume), together with samples of wares A, B, C and F from the outer fill of the ring ditch. A grog tempered body sherd [10.1] from the adjacent hillwash site PSP 53.10 was also examined.

Significant observations are as follows:

1. There is no petrological reason to differentiate between grog tempered fabrics A and B at the ring ditch and the sherds from site PSP 53.10. This evidence accords with the hypothesis that the pottery from both sites may be broadly contemporaneous although the same clay source could also have been utilised on different occasions. The presence of quartz grains, a little mica, some chalk in sherd 2.27 and incidental flint all seem to be compatible with a fairly local source.
2. There is no apparent petrological distinction between flint tempered wares C and F. Apart from the notable flint additives the petrological characteristics of the matrix of these wares, (including the presence of some quartz, mica and chalk), are all similar to the grog tempered wares.

3. There is no significant distinction between the shell tempered Grooved Ware from site PSP 53.9 and that from PSP 52.6. Clauconite present in sherd 24.3 from pit 4 serves to divorce the source of the Grooved Ware from that of the Bronze Age sherds at Barford Farm.

THE CHRONOLOGICAL IMPLICATIONS OF THE POTTERY FROM RING DITCH PSP 53.9

The earliest pottery in the excavated sample comprises the thirty-three sherds of Grooved Ware recovered from pit 4. These sherds seemingly signify Late Neolithic on-site activity before the construction of the ring ditch. The co-incidence between minor Late Neolithic occupation with Grooved Ware and the siting of Early Bronze Age barrows is well attested in Wessex at Bishops Waltham, Hurn and Roundwood, Hants; Avebury G55; barrows 3, 8 and 15 on Snail Down; West Overton G6B; Wilsford G51 and Wylve G2 (Wainwright and Longworth, 1971, 268-306).

It is particularly unfortunate that no sherds have been recovered from the inner ditch or from a context which might be directly equated with the primary construction of the monument. The sherds from layer 13 in the primary silt of the outer ditch may be arguably equated with a primary or a secondary event there being, regrettably, a lack of linking stratigraphy between the inner and outer ditches. The pottery from this context is best equated with products both preceding, and contemporary with, the transition between the production of British biconical urns and the emergence of the Deverel-Rimbury ceramic tradition. This event cannot be securely attested before the thirteenth century B.C.

An informative artefact from the primary fill of the outer ditch is basal sherd 13.1, Fig. 6; (which illustrates diagnostic ceramics excavated from the outer ring ditch). This belongs to a grog tempered urn with textural characteristics closely analogous with some late biconical urn pottery employed during the earliest phase of settlement at Shearplace Hill, Sydling St. Nicholas in West Dorset (Rahtz and ApSimon 1962, fig. 16 sherds nos. 1, 3, 4, 8, 9 and 10; fig. 18 nos. 39 and 42; fig. 19 no. 41; Tomalin 1983, 373-391, 591-601). Whilst the sherds of the opening phase at Shearplace offer the closest analogy in the size and quantity of grog temper it should be noted however that generally similar wares persisted also during the late phases at the same site. At Shearplace as well as in a number of Dorset Deverel-Rimbury burial sites the use of grog temper can be seen to have persisted well into the production period of bucket urns (Calkin 1962, 41).

Sherd 13.2 represents a flint and grog tempered vessel decorated with short lengths of eight-tooth comb point decoration. Subsequent to the production of Beaker pottery such decoration persists in the Collared Urn series and it is also a regional characteristic of the East Anglian, Urdleigh urns (Erith and Longworth 1960; Couchman 1975). Comb point is also known to occur in rare instances in domestic assemblages of biconical urn pottery at sites F49 and F50 at Hockwold, Norfolk (Tomalin 1983, 367) and in a single instance at Shearplace Hill (Rahtz and ApSimon, 1962, 314, fig. 18 no. 43). In the present case, the presence of some 5% flint in the matrix of the sherd tends to exclude this vessel from the

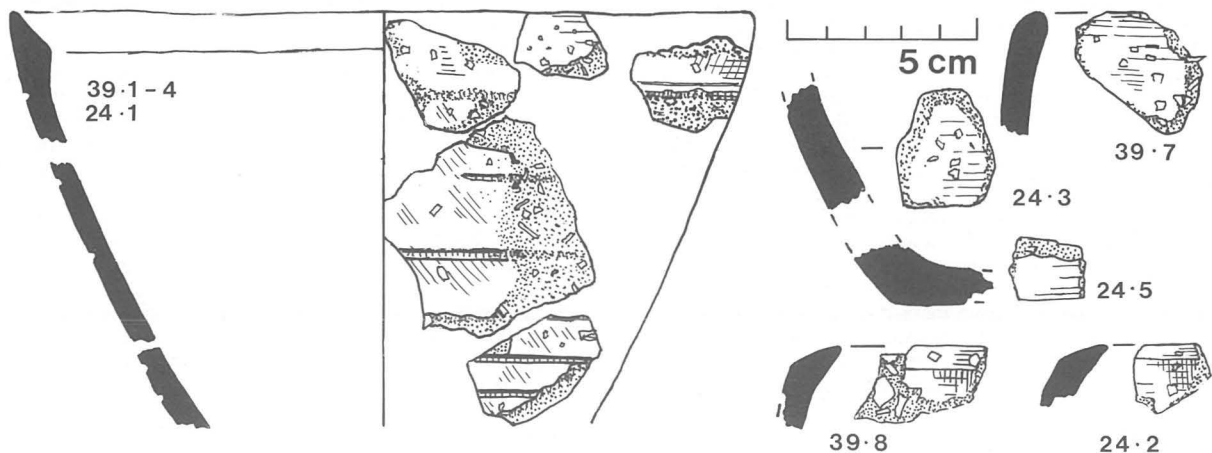


Figure 5. Grooved Ware sherds from pit 4, at $\frac{1}{2}$ life size.

Collared Urn series which in Wessex at least is almost exclusively characterised by the sole use of grog.

Sherds 13.3 and 13.4 represent either one or two flint tempered vessels composed of poorly fired laminating clay of fabric group C. The temper of these sherds is generally compatible with bucket urns. The poorly fired condition is likewise an acceptable bucket urn characteristic being noted in particular by Calkin (1962, 40-3). White (1982, 28) has, moreover, advocated that the selection of such poor quality pottery attests the use of potters' rejects for burial purposes.

Whilst the sherd yield from layer 13 remains small, the collective evidence provided by the ceramics suggests that the outer ditch was dug at a time when bucket urns of the Deverel-Rimbury series were in use and whilst the anachronism of Early Bronze Age comb point decoration still persisted.

Some final details concerning the general dating of the monument can be gleaned from the sherd yield from the tertiary phase of silting in the outer ditch. The relevant contexts are layers 2 and 12 which together have yielded a total of 45 sherds including twelve articulating fragments [2.31] of a thick-walled bucket urn of fabric group F, Fig. 6. This vessel can be readily matched amongst the regional ceramics first identified by ApSimon (1962, 320-1) at Shearplace Hill and equated by him with a Cranborne Chase group. Latterly these ceramics have been more closely defined by Ellison (1975, 186-193) as part of the Avon-Stour Group of Later Bronze Age bucket, barrel and globular urns.

Counting the bucket urn fragments [2.31] as a single find, the sherd sample from layers 2 and 12 indicates the presence of some 80% grog tempered pottery which due to the variety of individual textures could readily represent at least as many as fourteen different vessels. These sherds offer no stylistic attributes other than just one sherd which belongs to a biconical urn. A random sherd sample of this type is clearly useful for it seemingly presents much of the ceramic array available to the builders and users of the monument.

That the ceramic sample produced by such destruction excludes positive evidence for the use of Beaker pottery or of the use of Food Urn ceramics prior to the Biconical Urn is unhelpful to the dating of the site. The exclusion from the sherd sample, however, of the globular urn and barrel urn ceramics common to the Avon-Stour region might perhaps suggest that the monument may have been abandoned before the emergence of this particular Later Bronze Age style. Some sherds of type I or type III globular urns were to be found with a fragment of incense cup in the downslope hillwash at site PSP 53.10, (see Fig. 7 and Section E of this report), but the original context of this material is uncertain.

The presence of two sherds of Black Burnished Ware within the upper fill of the outer ditch (layer 2), including a rim sherd of Gillam form 146-148, could support the hypothesis that it was during the third or fourth century A.D. that the site was levelled and it was on this occasion that pottery embodied in the mound and funerary features of the barrow or ringwork was dragged into the outer ditch.

THE BRONZE AGE CERAMICS AND THE CULTURAL IMPLICATIONS AT RING DITCH PSP 53.9

The implicit association between Biconical Urn ceramics and the use of the Barford Farm concentric double ring ditch calls into discussion some further Dorset funerary monuments of similar design. This line of enquiry was first pursued in 1961 by Dr. Isobel Smith who regarded Wessex biconical urns as a characteristic of a particular people who might also perhaps be identified by their use of disc barrows with internal or double banks and by urn burials in slab-lined or stone-packed pits (Smith 1961, 115-117). The disc barrows cited by Dr. Smith were those defined by Grinsell in 1959 as the Dorset type. A more recent review of these and other disc barrows by Grinsell (1974) has identified four examples in which a concentric double ditch can be clearly identified. It is implicit that further examples of double ditches may yet be revealed by excavation in others of the thirteen disc barrows of this specialised type.

The pottery recovered from these disc barrows gives some support for the case for a construction date late in Aldbourne-Edmondsham, or Bedd Branwen phase of the Early Bronze Age when a transition to and overlap with Deverel Rimbury ceramics was already under way.

At Bincombe G3 a small atypical bucket-like vessel inverted over a cremation and covered with a flat slab was excavated by Charles Warne (1866, MOPR 27-8, p. 1, fig. 1; DCM accession 1885.16.32). In the neighbouring barrow of similar type, Bincombe G2, a comparable urn was also recovered by Warne (*ibid*) appar-

ently in a similar primary position. Grinsell (1982, 6) rightly prefers caution in conjecturing from these old excavations and the case is further complicated by the results of more recent work at Kingston Russell G3a (Bailey, Smith and Tomalin 1980). At this site a small bowl barrow containing a beaker inhumation was remodelled on two occasions by the respective digging of an inner and outer ditch. The purpose of these concentric ditches was, however, primarily concerned with the redemarcation of the original burial mound although some of the quarried spoil, from the outer ditch, may so perhaps have been used to throw up an annular bank converting the monument into a disc barrow 22.8 m in diameter. The stratification showed that the inner ditch had soon been concealed by chalk waste spreading from the mound and that this deposit had been subsequently cut by an intrusive pit containing a child inhumation with a form 3 food vessel/urn (Bailey *et al* 1980, 25 fig. 5, P8). The form of this food vessel/urn accords with the widespread response by Food Urn potters to the shouldered style of biconical urns (Tomalin 1984 and 1988) and it places the burial sometime during the Aldbourne-Edmondsham phase. Also intrusive in the same fill was a cremation contained within a small multi-lugged bucket urn (P9) which was possibly protected by a larger inverted vessel of the same series (Bailey *ibid* fig. 5 where P9 is wrongly labelled as P12).

Whilst there is clear evidence at Kingston Russell for both conversion to a disc barrow and for the re-use of the monument by users of form 3 Food Urn and Deverel Rimbury ceramics, there remains no means by which these two events can be unquestionably linked. It should be observed moreover that the process of adaptation at Kingston Russell G3a had produced close-set concentric ditches which bear no close comparison with the ditch plan at Barford Farm.

Whilst the body of relevant excavated sites within the County of Dorset remains small, some more distant analogies to the Barford Farm ring ditch are particularly apposite. At barrow 14 at Radley, Berks., a concentric double ring ditch of comparable plan has yielded a primary cremation accompanied by an Inception Series biconical urn and a bronze razor (Leeds 1936, 8-13; Tomalin 1983, 230, 298).

Another concentric double ring ditch in this cemetery is barrow 12 which significantly has yielded a biconical urn accompanying a child inhumation. In this latter case the biconical urn postdates with the conversion of a primary Beaker grave mound into a disc barrow. The absence of biconical urns from the remainder of the Radley barrow cemetery moreover tends to reinforce the cultural association between this specific type of disc barrow and the Biconical Urn ceramic tradition. At ring 6, Hamborough, Oxfordshire a double concentric bank was apparently quarried from a single annular ditch surrounding a further Biconical Urn cremation (Case *et al* 1965, 37, fig 15).

For the origins of both biconical urns and some forms of double concentric ring ditches we must look southward from the Wessex seaboard to diverse Early Bronze Age communities occupying the north-west European Plain. Of particular interest are the double concentric ring ditches in the valley of Aisne at Portavert and Bucy le Long in Picardie where comparable biconical urn cremation burials are to be found (O'Connor 1980, 278; Burgess 1987, 308-9; Brun and Pompepy 1987). To these we may add the Dutch example Tumulus 1B with its biconical urn burials and double concentric ditched annex in the Touterfout barrow cemetery in North Brabant (Glasbergen 1954, 36-40).

We must be mindful however that concentric double ring ditches by no means invariably signify the former presence of disc barrows. On excessively ploughed sites the former enlargement of the mounds of bowl barrows may be now denoted by concentric double ring ditches. In such cases the berm between the two ditches frequently but not invariably seems to be proportionally narrower as demonstrated at Long Crichel barrows G7 and G23 (Green *et al*, 1982 fig. 4, Piggott and Piggott 1944 p. 24). Sweet Briar Road, Norwich site 366 (Bown 1986, fig. 54) and Little Cressingham site 5053 (Lawson 1986, fig. 5). The exception however is disquietingly demonstrated at Long Crichel G5 (Green *et al*, fig. 2) where a Beaker barrow demarcated by a modest ditch 8 m in diameter was later encased beneath a mound 16 m in diameter. The material for the new mound was won from an outer ditch 21 m in diameter. At this barrow there can be no question that an outer bank ever existed. It is salutary to observe that had this site been totally levelled by ploughing it would undoubtedly provide a double concentric ring ditch with berm width and proportions remarkably similar to those at Barford Farm.

Whilst the plans of Barford Farm and the Long Crichel G5 site would share some characteristics, at present the analysis of ditch

layout seems limited, as a means of differentiating between disc barrows and bell or bowl barrows on plough-levelled, double-ditched sites. This situation is illustrated by the close-set concentric ditches at Kingston Russell G3a disc barrow and the similar narrow bermed style of concentric ditches associated with enlarged bowl barrows, as described. Nevertheless, the asymmetrical silting profiles apparent in the excavated sections at Radley barrows 12 and 14, and at Bucy le Long sites C4 and C5 intimate that the outer ditches of these monuments may frequently have served to provide material for an external bank of typical disc barrow character. At Barford Farm the sorting and silting profiles evident in the eight ditch sections are not very helpful in establishing the original function of the outer ditch; while the pattern of silting within the recut areas of this ditch are strongly suggestive of a substantial internal mound or bank. The consistently steeper gradient of the external face of the outer ditch could, however, be attributed to preservation beneath rapid inwash derived from an outer bank. This contrasts with the

berm face of the same ditch that shows an angle of repose consistent with the type of protracted weathering which might be predicted in the absence of protective silt, derived from an internal mound.

Turning to the inner ring at Barford Farm, it is evident that the ditch here was rapidly silted before effective degradation of the wall faces could take place. There is no particular reason to believe this central part of the monument to be contemporary with the outer ditch and indeed the radiocarbon date of 3630 ± 120 B.P. HAR-9597 from the primary ditch fill and presence of the Beaker style child inhumation in the central pit 9, of approximately contemporary date, 3580 ± 80 B.P. strongly suggest that it ante-dates it. Whether the inner ditch represents quarrying of material solely for the construction of a mound or included re-demarcation of earlier features cannot be determined.

At barrow 12 Radley, the primary mound containing a Beaker inhumation with a bronze-awl had apparently been surrounded by

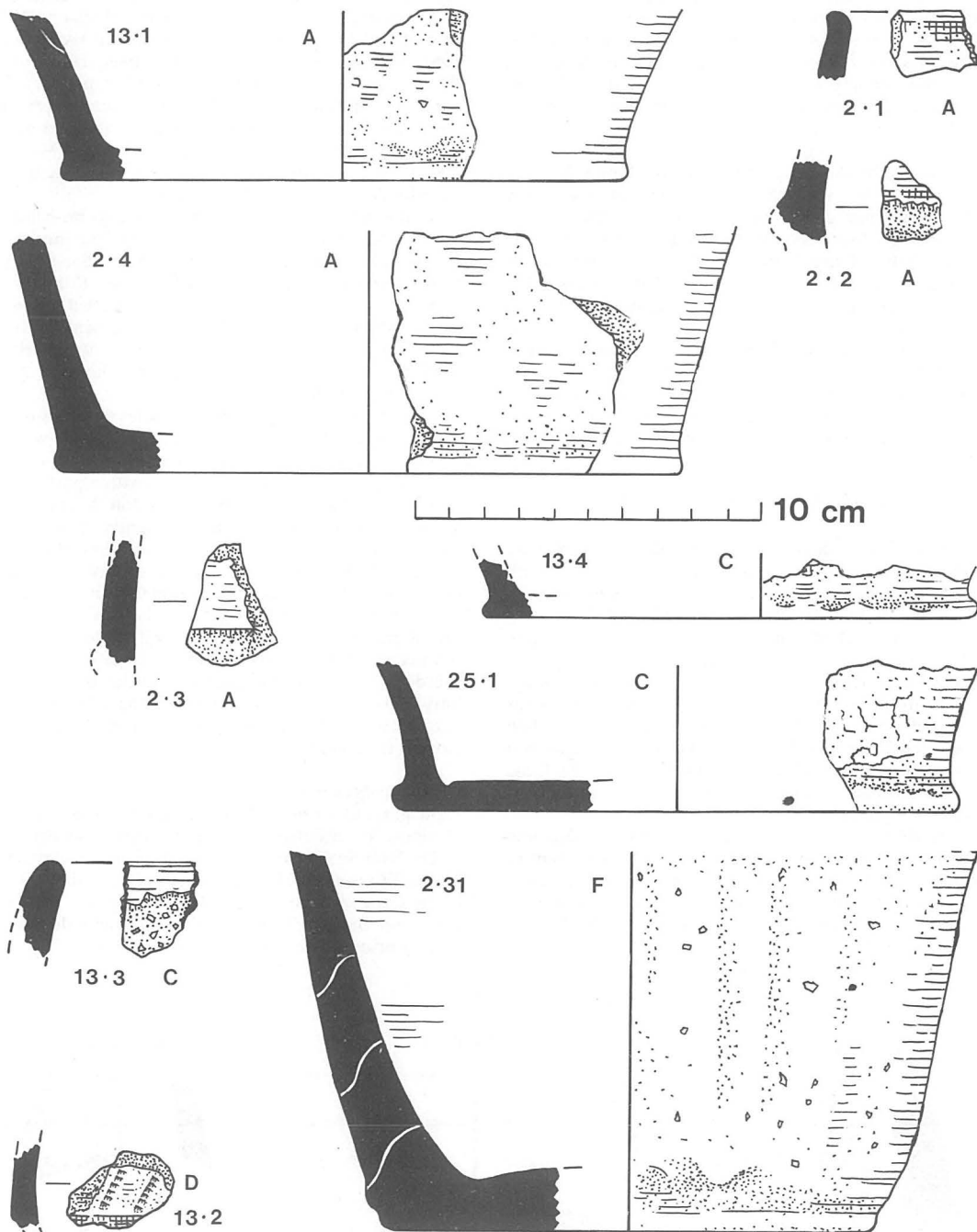


Figure 6. Bronze Age pottery from outer ring ditch, at $\frac{1}{2}$ life size, (letter coding refers to ceramic fabric type).

its own circling quarry ditch well before the monument was reused for a cremation burial with a form 3 food vessel. The later embellishments also included an outer concentric ditch (Claire Halpin pers. com.). A secondary child inhumation with a biconical urn was subsequently deposited in the middle silt of the outer ditch. Similarly at Kingston Russell G3a, a small Beaker bowl barrow was likewise adopted for conversion into a disc barrow, a process which could perhaps have taken place at Barford Farm. At Radley barrow 14 and at Pontavert, however, both the central biconical urn burials and the entire concentric ditch structures were all seemingly contemporary.

At Touterfout 1B and at Bucy le Long C3-C4, the concentric double enclosure was seemingly devoid of burials whilst biconical urn cremations were interred within an annexed single-ditched barrow. At site 1B the enclosure and barrow were apparently contemporary whilst at Bucy le Long the enclosure had been annexed at a time when the silting of the barrow ditch was already well advanced.

The possibility that a biconical urn burial, as represented by sherds 2.2, and a Deverel-Rimbury bucket urn burial were ploughed out of the Barford Farm barrow in the fourth century A.D. has already been cited. Such burials might perhaps have been accommodated in truncated pits 5, 6, or 7. At Pontavert and Bucy le Long monument C3, the primary burials were both sited in shallow scoops each with a piled protective covering of large stones assembled over the upward-projecting and vulnerable portions of the biconical urn.

Since the excavation by the Reverend A. B. Hutchins at Winter-slow G3, Wiltshire, in the year 1814, the consistent association between shallow stone-packed cremation burials and the specific use of biconical urns gradually become self-evident. This mode was clearly encountered by Henry Durden and William Shipp on 4 October 1854 when excavating the primary burial at Bloxworth G4 and it might be suspected in other Dorset biconical urns burials where the records are sadly less specific. At Barford Farm the sometime use of a form 3 biconical urn is attested by sherd 2.2 but due to the prolonged and extensive plough damage to the site no firm corroborative evidence for an association between this vessel, a cremation burial and a specific phase of barrow conversion or construction to conform to a disc, bell-disc or ditched bowl form can now be established.

SUMMARY OF THE GROOVED WARE FROM BARFORD FARM, PSP 53.9

In pit 4 near the centre of the concentric double ring ditch (site 53.9) 33 sherds of Grooved Ware were found in association with clay marl daub. Here at least five different vessels were present. The sherds from the pit were generally small and eroded and only one conjectured reconstruction could be made, Fig. 5. This vessel, from pit 4, was an open-form jar resembling Durrington P218 but differing in the arrangement of its incised decoration and displaying also more openly splayed profile. The two bevelled rim sherds from this pit resemble a Late Neolithic rim from the disturbed Grooved Ware assemblage found scattered throughout the mound of the Great Barrow at Bishops Waltham (Ashbee 1957, 153-4, fig. 10 no. 1). The rim form is seemingly uncommon and it is not to be found at either Durrington or Mount Pleasant.

The 40 sherds found at site 52.6 were similarly eroded and although the material appears to have represented a minimum of 13 vessels, the sherds could not be formed into any single vessel reconstruction. In comparative terms this second site greatly broadened the stylistic array of the Grooved Ware found, see Addison in Dorset Archaeology 1989.

In general terms the collective assemblage of sherds from the pipeline sites may be favourably compared with the collection of Grooved Ware recovered 23 km downstream of the Stour at Hengistbury Head. Here, too, the principal stylistic analogies are to be found in the Durrington Walls sub-style whilst a small number of sherds with stab and drag-filled zones attest the presence of the Clacton sub-style (Gardiner 1987, 38-47).

THE POTTERY FROM THE ADJACENT SITE PSP 53.10

The eleven sherds [10.1-10.11] recovered from this context offer a miscellany of fabrics. A broken and eroded sherd [10.2], seemingly burnt, contains some 3% fine rounded quartz and incidental traces of very fine particles of decalcified shell. This sherd represents a basal portion of a miniature vessel with a base diameter of 60 mm, Fig. 7. Some very faint weathered grooves on the external surface suggest that this vessel was perhaps well decorated all over. Although badly eroded the sherd also reveals traces of a vertical basal perforation which is some 3 mm in diameter and is presumably one of several. This sherd is in all probability residual and it is reminiscent of certain accessory vessels or 'incense cups' such as those recovered from Wilsford G36F, Wiltshire, Whitcombe G1, Dorset and Danby Rigg, North Yorkshire (Annable and Simpson 1964, 114, cat. no. 445; Longworth 1984, 191-2, p. 74c., (where drawing omits basal perforations) and 242, p. 101). The excavators observe that this sherd has been recovered approximately 350 m downslope from ring ditch PSP 53.9 At the ring ditch, grave pit 3 could have formerly provided an appropriate Wessex Grave context for such an 'incense cup', before the contents of this feature were totally ploughed out in antiquity.

Further eroded pieces which might also be considered residual are grog tempered sherds 10.1 and 10.11. The former sherd displays a soft oxidised fabric and weak pinched cordon which is compatible with a biconical urn of the form 3 type (Tomalin 1984, 70-71). Sherd 10.11 is a small crumb of a thin-walled grooved vessel tempered with some 5% rounded chalk fragments with a particle size mode set around 3 mm. It is tentatively attributable to Grooved Ware but lacks the shell temper which otherwise characterises this ware at Barford Farm.

For a *terminus post quem* for this layer the most helpful sherds are 10.3 and 10.8. Both are composed of a hard, well fired, reduced very dark grey to black clay, tempered respectively with some 5% and 7% fine calcined flint fragments with a particle size mode of 2 mm. Remnants of a fingertip [?] cordon 20 mm below the rim of sherd 10.3 seems by its position to signify the presence of a horse-shoe handle rather than a shoulder cordon. Both sherds are thin with a smooth surface finish which is otherwise characteristic of the type 1 and 111 globular urn contingent of Deverel-Rimbury fine ware. There seems little doubt that sherd 10.8 belongs to a globular urn of one or other of these types whilst sherd 10.3 seemingly represents a bucket urn executed in similar fabric. The remaining body sherds [10.4-7] all seem generally attributable to the Deverel-Rimbury ceramic tradition but a well weathered shapeless sliver of very hard oxidised clay [10.12] could possibly represent a fragment of Roman fineware.

Acknowledgements

I am grateful to my colleagues Arthur ApSimon and Dr. David Williams for discussions on the Neolithic and Bronze Age sherds, to Dr. Rob Scaife for his examination of the clay daub and to Dr. Richard Preece for his examination of the palaeomolluscan temper of the Grooved Ware sherds. Claire Halpin of the Central Excavation Unit has kindly provided a plan and details of barrow 12 Radley prior to her forthcoming publication.

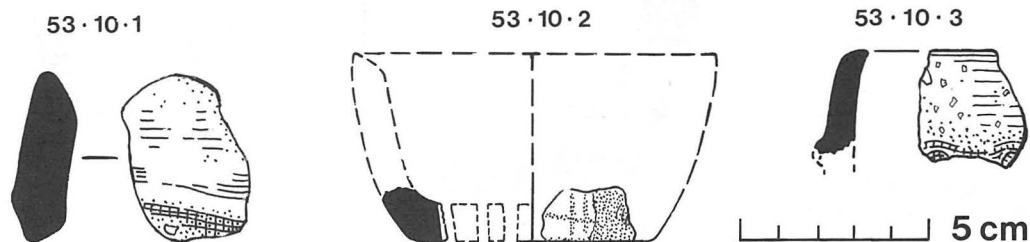


Figure 7. Bronze Age pottery from downslope colluvial deposit, at $\frac{1}{2}$ life size.

Notes

All individual sherds except some which fit with others have been individually numbered. These numbers have been suffixed to the context or layer number at site 53.9 but at site 53.10 where no contexts are given (i.e. within the colluvium), they have been suffixed direct to the site number.

THE FLINT
DAVID MAYNARD

The total assemblage of flints from this site was 979 pieces, all of which had a white patinated surface. The material was presumed to be of local origin.

Table 1., shows the various elements represented in the Barford Farm flint industry.

Cores (not illustrated).

These were classified according to the number of striking platforms as in Clark (1960) at Hurst Fen. Of the 40 cores from the site 70% were from Class A, 10% were of Class B, 7.5% Class C and 12.5% Class D.

TABLE 2
Flint Core Types

A ₁	A ₂	B ₁	B ₂	B ₃	C	D	E
4	24		1	3	3	5	

The core weights are surprisingly small, although there is a wide range in weight, the majority are under 75 grammes. Two core rejuvenation flakes were noted, the use of this technique would tend to reduce the size of cores found. Most of the lengths of flakes removed from the cores lies almost completely in the range of 20-40mm which accords well with the predominant lengths of waste flakes measured from the site. The average number of flakes taken from each core was 4.5.

TABLE 3
Weights of Cores in Gms

0-25	25-50	75-100	100-125	125-150	150-175	200>
6	13	9	6	4	1	1

TABLE 1
The Flint Industry

	Outer Ditches			Inner Ditches			Pit	Site Total
	11	1	Total	14	18	Total		
CORES	16	21	37	1	1	2	1	4
FLAKES								
Primary Flakes	29	16	45	9		9	12	66
Secondary Flakes	68	42	110	26	2	28	36	174
Tertiary Flakes	61	36	97	29	8	37	77	211
Core rejuvenation flakes	2		2					2
Broken or unclassified flakes	132	130	262	37	4	41	162	465
Total Wasteflakes	290	224	514	101	14	115	287	918
IMPLEMENTS (FIGS. 8-10)								
Scrapers	2	3	5				8	13
Serrated flakes		1	1				6	7
Utilized flakes							1	1
Total flint by feature	310	249	559	102	15	117	303	979

Waste Flakes

All unbroken flakes were measured (a total of 485) to determine their length and breadth. This was taken as the greatest measurement along the bulber axis for length and the breadth as the greatest dimension at right angles to the axis.

For the site as a whole, the most common length of all flakes was 30-40mm, (58%), while 66% of flakes had a breadth in the range of 20-40mm. Table 4 shows the dimensions of waste flakes and their percentages for cortical and non-cortical flakes from the ring ditches and pit 4.

In both ditches and the pit the most common length was between 30-50mm, the non-cortical flakes were shorter, 86% were of 20-50mm in the ditches and slightly shorter again in pit 4; 69% being in the range 20-40mm. The most common breadth for all flakes of both ditches and the pit was in the 20-40mm range, around 70% (both cortical and non-cortical) being in this group. The table above shows no particular difference between waste material in the ditches and the pit, other than the fact that 60% of the ditch material is cortical, while 32% of the pit material is cortical. Perhaps, this implies a selection of prepared flint nodules for knapping around the pit.

TABLE 4

Length (mm)	Ring Ditches				Pit 4			
	Cortical No.	%	Non-Cortical No.	%	Cortical No.	%	Non-Cortical No.	%
0-10	0	0	0	0	0	0	0	0
10-20	2	1	11	8	2	4	2	2
20-30	32	16	44	32	6	13	32	31
30-40	59	29	36	27	11	23	39	38
40-50	67	33	37	27	15	31	20	20
50-60	26	13	3	3	7	14	9	9
60-70	8	4	2	2	4	8	0	0
70-80	4	2	0	0	2	4	0	0
80-90	3	1	1	0	0	0	0	0
90-100	0	0	0	0	1	2	0	0
	201		134		48		102	
Breadth (mm)								
0-10	4	2	1	1	0	0	0	0
10-20	30	15	19	14	4	8	17	17
20-30	64	32	59	44	12	25	52	51
30-40	56	28	37	28	18	38	25	24
40-50	34	17	12	9	10	21	4	4
50-60	7	4	4	3	2	4	4	4
60-70	6	3	2	1	2	4	0	0
	201		134		48		102	

In terms of the shape of flakes, the breadth:length ratios showed 3.5% of flakes to be 2:5 or less, while 31.6% of flakes were 5:5 or more. The breadth length index (after Saville in Mercer 1981) is shown in Table 5.

TABLE 5
Percent of Wasteflakes

	Ditches	Pit 4	Whole Site	
> 0.5	1.2	1.8	1.3	\
0.6 - 1.0	42.5	25.9	38.4	/
1.1 - 1.5	37.0	38.8	37.5	\
1.6 - 2.0	12.6	19.4	14.3	/
2.0 - 2.5	4.9	7.4	5.5	\
2.6 - 3.0	1.5	5.5	2.5	/

Flint Implements (all illustrated in Figs. 8-10).

Scrapers

Thirteen scrapers were found on the site, eight from pit 4, the other five were retrieved from the outer ring ditch.

Seven of the scrapers from the pit were of end scraper type, Fig. 8, 1-7; the remaining side scraper may alternatively have been a small worn saw, (J. Humble pers. comm.), Fig. 8, 8. The seven end scrapers had round scraping surfaces and a steep angle of retouch; two examples both of which had been burnt showed a shallower angle of retouch; Fig. 8, 3 and 5. Since one of these pieces appears to have been worked after the flint was burnt, (J. Humble pers. comm.), the burning of the material may have been significant in the manufacture and function of the scraper.

Similarly, end scraps were in the majority from the outer ditch, just one side scraper was found, Fig. 10, 5, which may originally have been a serrated blade. Two of these end scrapers were made from fairly robust, thick flakes on which a high proportion of cortex had been retained which were characterized by a crude style of retouch and displayed signs of heavy use, Fig. 10, 1 and 6.

Serrated Flakes (as defined by Smith 1965 91)

At Barford farm these consisted of seven secondary flakes on which only fairly small areas of cortex remained with a line of serrations or minute denticulations along one edge of the flake. The serrations consist of a number of small chips taken out of the edge which ranged in number per 10mm between 7 and 11 with an average of 8.5, that is spacing is less dense than the average of 13.5 per 10mm, noted by Smith. The three unbroken flakes on which serrations were made were, 69, 65 and 55mm long. All these flakes came from pit 4, Fig. 9, 1-6, except for one small example, Fig. 10, 4, excavated from the outer ditch.

Utilized flakes

One flake was found showing signs of apparent utilization, Fig. 8, 9.

Burnt Flint

Two of the flint scrapers, two of the serrated flakes and several waste flakes were affected by burning to some extent.

Pit 4, however, contained a large amount of burnt flint that was both lumpy and unworked, 6.170 kg in total. This burnt flint could be divided into three groups.

- 1 Fire-affected flint with a crazed surface, but heat cracks that did not penetrate deep inside the body of the nodule. Most of the cortex was retained. This group made up 20% of the burnt material by material with an average weight of 42 grammes per piece.
- 2 Extensively burnt flint with a deeply crazed surface, but with large proportion of cortex remaining. This consists of 39% of the material with an average weight per piece of 35 grammes.
- 3 A group of very intensively burnt flint with deeply penetrating cracks and no cortex surviving. The effect of heat had caused some of the flint to fragment as is shown by the average weight per piece of 22 grammes. This group made up 41% of the material.

Discussion

For a purely funerary monument, the number of flint implements is

rather high, particularly as only a small proportion of the outer ring ditch was excavated. The percentages of the cores, waste flakes and retouched artefacts for all three of the major contexts of the site are presented in Table 6.

Pit 4

Breakdown of information in Tables 1 and 6, indicates that 62% of the flint implements excavated from the site, were from pit 4, a discrete feature which has been found to pre-date the construction of the barrow. In the pit, flint implements, primarily scrapers and serrated flakes comprised 5% of the flint material, which taken with low number of cores present, this pattern correlates with other sites of prehistoric date that are considered to have a domestic function, (Wainwright 1972, 66).

Deposits contemporary and similar to pit 4 are often characterized by the predominance of flint scrapers within the implement assemblage (Wainwright 1971, 52), a pattern that is evident at Barford Farm. Serrated flakes make up 40% of the total implement assemblage from pit 4, a higher proportion (53%) of these tools was found in the primary levels of Windmill Hill, while at Hurst Fen and Bishopstone in Sussex, (Healy 1980, 244), are more comparable with Barford Farm, pit 4, with serrated flakes representing 45% and 43% of the flint implements on those sites respectively.

TABLE 6

Feature	Percentage (%) of Wasteflakes	% Cores *	% Tools	
Pit 4	94.7	0.3	5	N = 303
Inner Ditch	98.3	1.7	0	N = 117
Outer Ditch	91.9	7	1.1	N = 559
Total Site	93.6	4.3	2.1	N = 979

*Including 2 core rejuvenation flakes.

The Ditches

The proportionately higher number of cores from the outer ring ditch, compared to the inner ditch, could imply that flint knapping was an important activity in a period post-dating the excavation and use of pit 4. No knapping clusters or even dense pockets of debris were located in the ditches as was the case from the ditches round the triple barrow at Micheldever Wood (Fasham 1978, Fig. 10), although the processes of deposition, and of destruction of the Barford Farm monument would reduce the possibility of finding such concentrations. Similarly, given the absence of any upstanding part of the site it can not be said any of the flint at Barford Farm would have been incorporated into a cairn covering or incorporating any of the burials on the site.

HUMAN BONE

GILLIAN STROUD

The human bones recovered consisted of a single inhumation, apparently in a crouched position; interred in the lowest part of pit 9, Fig. 4.B and Plate 6. The bone was in a fair state of preservation, although there had been some postmortem erosion of the surface and few bones were complete.

The burial was that of a young child, aged approximately 2 years. Most of the skeleton was represented. The skull was relatively complete but fragmented. The maxilla was damaged in the area of the right incisors and both canines were missing postmortem; however the left incisors and the right and left molars were present. The mandible was relatively complete, with all 10 deciduous teeth present and apparently fully erupted. Arm bones were in a better condition than leg bones. The pelvic bones were recovered. Age estimation was based on the state of fusion of the bones (Warwick and Williams 1980), on long bone diaphyseal measurements (Workshop of European Anthropologists 1980) and on tooth eruption (Ubelaker 1980). These together gave an age range of between 18 months and 3 years.

No pathological changes were noted. The only observations that were made were slight crowding of the anterior teeth in the mandible, and the presence of a small defect in the enamel of a mandibular canine. Skinner (1986) studied these defects in several skeletal groups from different periods and found them to be quite common, although the etiology appears to be unknown at present.

The upper fill of pit 9 produced some 50 or so fragments of

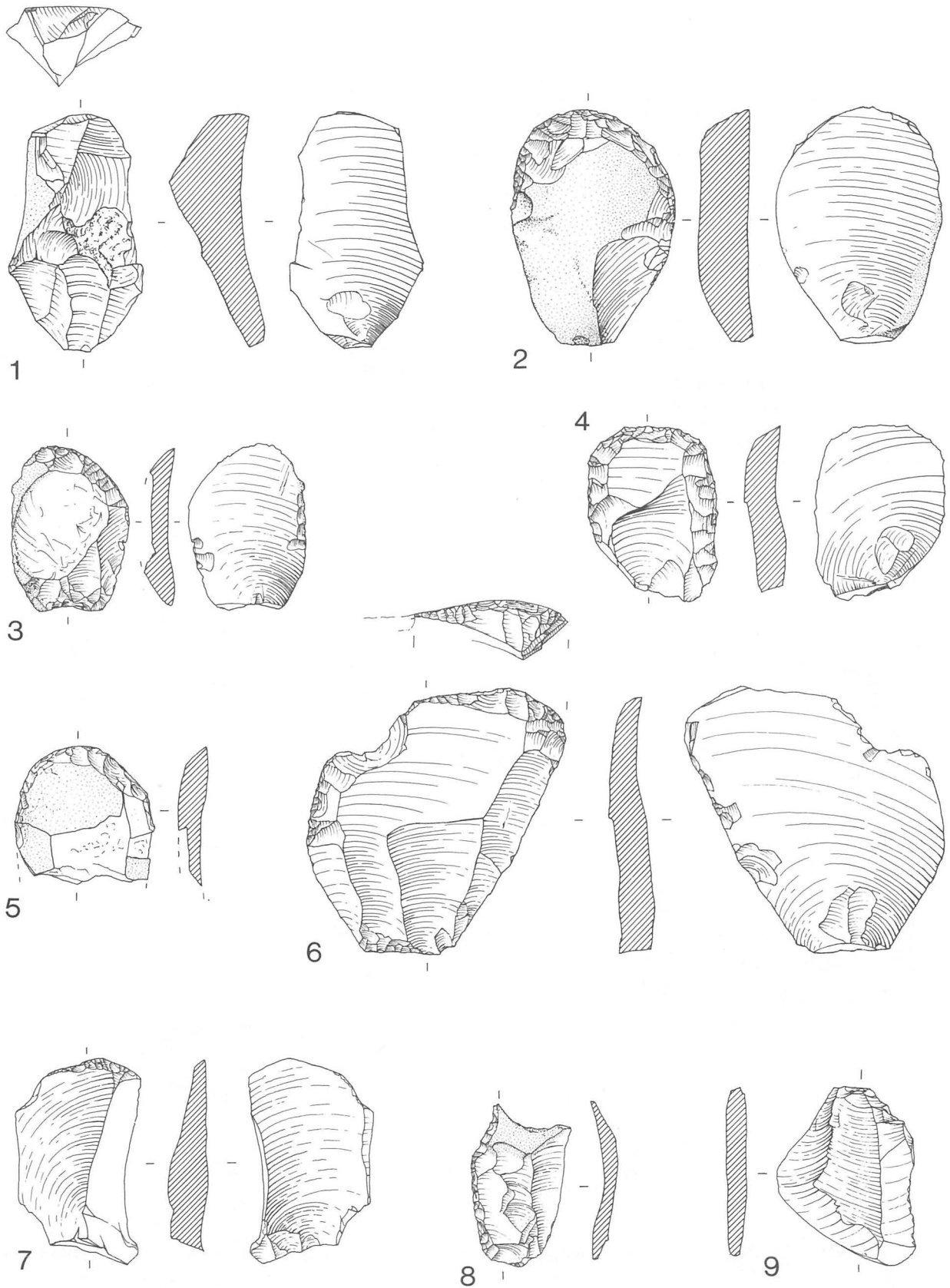


Figure 8. Flint from pit 4, at $\frac{2}{3}$ life size, 1-7 end scrapers, 8 side scraper, 9 utilized flake.

cremated bone. None of these could be positively identified. Similarly a few fragments of cremated bone were recovered from pit 7.

NOTE ON THE CONDITION OF THE BONE

LYNNE S. BELL

One of the long bones from the above skeleton was analysed by Lynne Bell, as a part of Doctorate research into the condition and preservation of bone in the different soil types of the British Isles. This work showed that the bone which had been preserved in the chalky silts of pit 9, had undergone extensive microscopic changes since its original deposition. The 'bone' had, in fact, completely remineralized and was punctured with holes from fungal and bacterial action, greatly reducing the amounts of collagen present. This change of state could be of considerable importance when bone is to be submitted for any technique which requires good bone preservation, mostly obviously for radio-carbon determination. The changes that occurred in the bone may have been related to the properties of growing bone as opposed to adult bone. Further comparative work may prove informative in this respect.

Fuller detail of this analysis will be placed in the site archive.

ANIMAL BONES

MARK MALTBY

Animal bones were recovered from the ring ditches and from one of the internal pits, (pit 4). Bones from the ring ditches were few in number and poorly preserved. The inner ring ditch produced only four unidentifiable fragments. The bones in the outer ring ditch consisted of fragments of cattle tibia, mandible and metacarpal and six unidentifiable fragments.

The remaining animal bones from the excavations were found in pit 4. This feature produced 357 fragments, most of which were recovered from context 24 (Table 7). Although many of the fragments had slightly eroded surfaces, all the bones had survived in a much better condition than those from the ditches. A relatively large proportion of the bones were charred and 27 fragments in context 24 bore evidence of carnivore gnawing (Table 7). All but one of the gnawed fragments were pig bones.

TABLE 7
Species represented in Pit 4

Species	Context			Sieved	Total
	24	39	41		
Cattle	35	6	3		44
Pig	92	20		1	113
Red Deer	12	4			16
Roe Deer	1				1
Unid. Large Mammal	84	11	3		98
Medium-sized Mammal	41	15	2	1	59
Unid. Rodent				3	3
Unid. Mammal	17	5	1		23
TOTAL	282	61	9	5	357
Eroded Fragments	199	58	2		259
Charred Fragments	65	12	1		78
Gnawed Fragments	27				27
Butchered Fragments	9		1		10

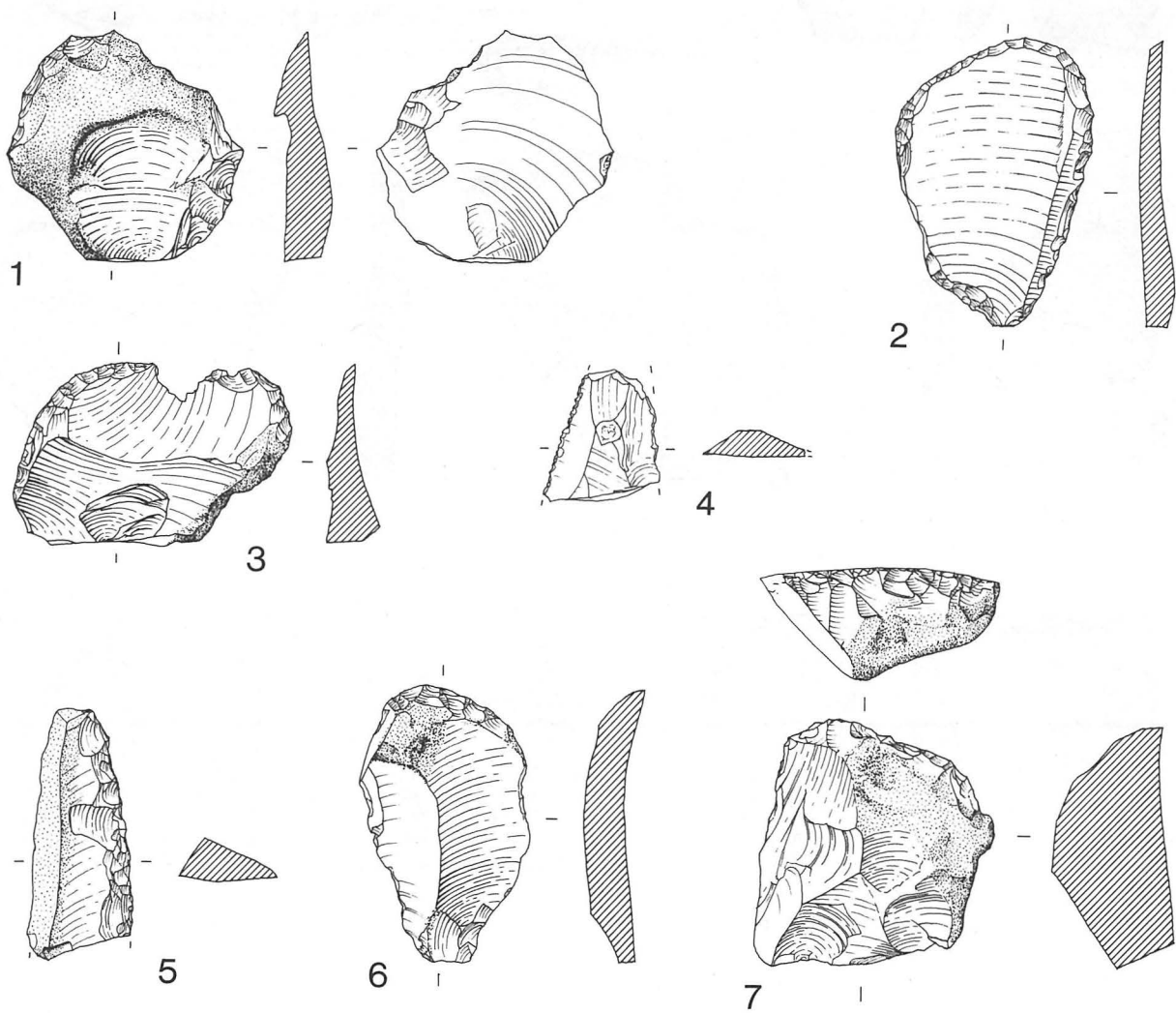


Figure 10. Flint from outer ditch, at 2/3 life size, 1-3 end scrapers, 4 serrated flake, 5 side scraper, 6 end scraper.

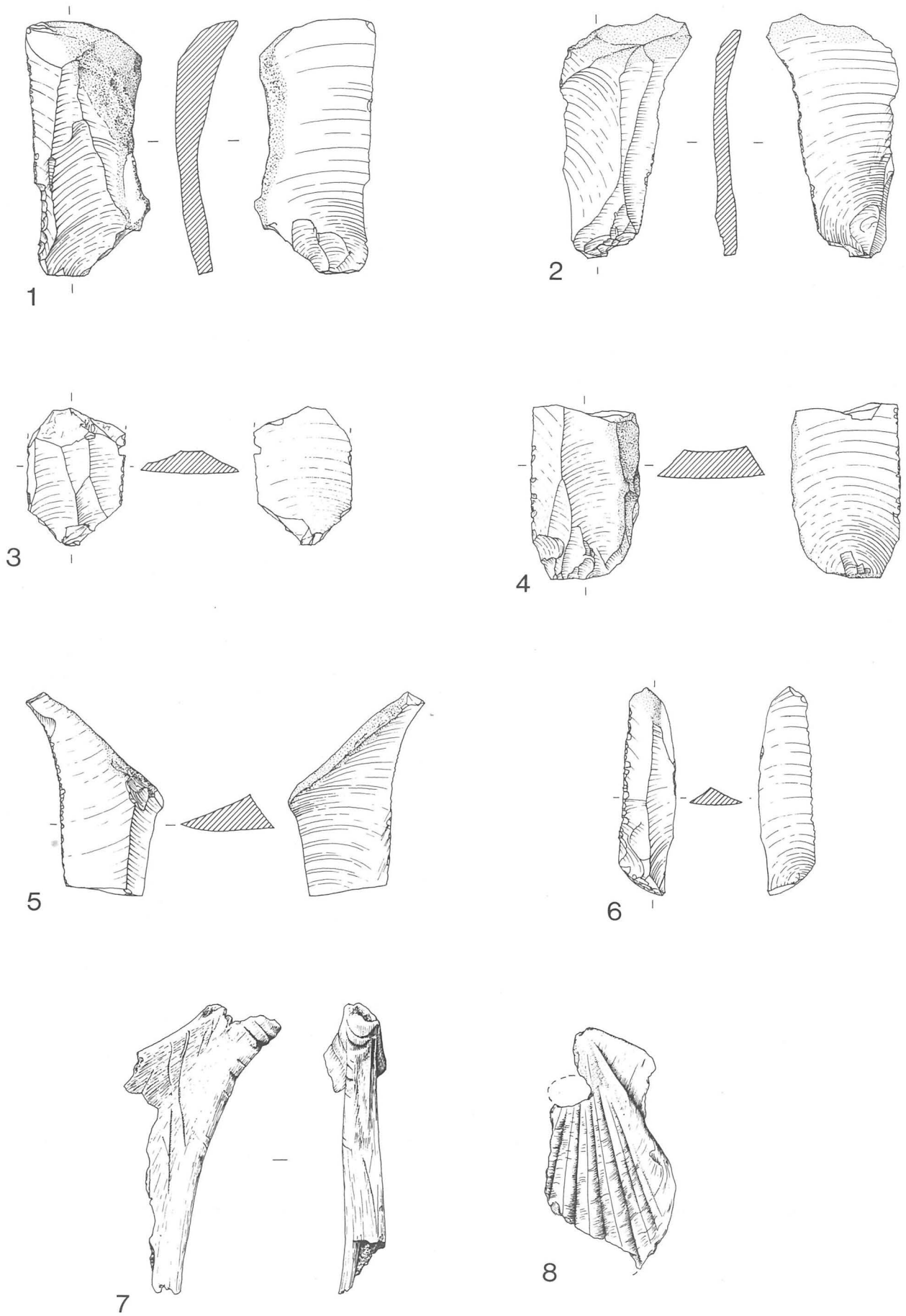


Figure 9. Material from pit 4, at $\frac{2}{3}$ life size, 1-6 serrated flakes, 7 butchered pig bone, 8 scallop shell.

The species identified were domestic pig and cattle, red and roe deer. The small amount of material recovered from the sieved samples included three rodent bones. These were the size of short-tailed field voles or mice. No bones of sheep or goat were identified. Therefore it is assumed that most, if not all, the unidentified medium-sized mammal fragments belonged to pig. Similarly, most of the unidentified large mammal fragments probably belonged to cattle (Table 7).

Forty-four fragments of cattle were recorded (Table 8). Most of these bones may have belonged to one animal. These included a pair of metatarsals. Their proximal ends were found in context 24 but their distal portions lay in context 41. The breaks were not modern. The shaft of the left metatarsal was distorted resulting in the slight foreshortening of the bone. The right specimen had a maximum length of 224.3 mm. This measurement can be converted into an estimated withers height of 122.2 cm, using the conversion factors of Fock (1966). These metatarsals were associated with all the larger tarsal bones (astragalus, calcaneus, centroquartal). Knife cuts were observed on the medial aspect of the right metatarsal close to the proximal articular surface. The right centroquartal had knife cuts on its lateral aspect and both astragali bore cuts on their anterior surface. The left calcaneus had a knife cut on its medial surface. All these cuts could have been made during the detachment of the feet from the upper hindlimbs at the anklejoint. The right astragalus had been charred slightly at its proximal end.

TABLE 8
Elements Represented of Identified Species in Pit 4

	Cattle	Pig	Red Deer	Roe Deer
Skull frags.		6		
Antler frags.			14	1
Mandible	1	7		
Loose teeth	2	7		
Scapula		5		
Humerus	2	3		
Radius	3	6		
Ulna	1	9		
Os Coxae	3	10		
Femur	3	6		
Tibia		5		
Carpals	5	1		
Calcaneus	2	4		
Astragalus	3	3		
Centroquartal	2			
Other tarsals	2			
Metacarpal	1	2	1	
Metatarsal	4	12	1	
Lat. Metapodial	1	5		
1st Phalanx	5	8		
2nd Phalanx	2			
3rd Phalanx	2			
Ribs		4		
Thoracic vert.		9		
Lumbar vert.		1		
TOTAL	44	113	16	1

A left metacarpal was also recovered from context 24. It was associated with five of the carpals and the vestigial fifth metacarpal bone. Its maximum length of 199.00 mm translates into a withers height estimate of 121.9 cm when Fock's (1966) conversion factors are employed. It seems likely therefore that these bones are from the same animal as the hindfeet described above. Eight phalanges were also recovered and these almost certainly all belonged to the toes of the same animal. The presence of these associated bones and the lack of gnawing marks on them indicates that the feet were probably dumped directly into the pit after initial processing of the carcass. The feet were removed from the major meat-bearing parts of the body. The metatarsals may, however, have been broken open for their marrow before disposal.

Several of the other cattle bones may also have belonged to the same skeleton, notably the left radius and ulna. Both these bones lacked their distal ends. However, at least three cattle were represented in the pit. Two left pelves (os coxae) were recovered. The more substantial specimen bore a knife cut on the shaft of the pubis. The shape of the acetabulum (Grigson 1982) suggested that it also belonged to a cow. A second fragment of a left radius bore a

knife cut on the shaft near the proximal end on its anterior surface. A third animal was represented by a shaft fragment of a femur. Its porous condition indicated that it belonged to a calf. Epiphysal fusion evidence showed that the other cattle were older than this.

The measurements taken on the cattle bones are given in Table 9. The relatively slender proportions of the metapodials indicates that they probably belonged to a female. The astragalus and calcaneus belonged to the same animal. The overall size of these and the other cattle bones falls within the ranges of later neolithic and early Bronze Age material from other sites in southern England.

TABLE 9
Cattle Measurements from Pit 4

Element	GL	Measurements (mm)					GLI	GLm
		Bp	Dp	SD	Bd	Bdf		
Metacarpal	199.0	56.4	34.0	32.0	55.4	51.9		
Metatarsal	224.3	46.3	43.5		52.8	48.9		
Calcaneus	130.5							
Astragalus							64.7	57.5
Radius		80.4	40.7					
Femur		118.9	44.8					

All measurements follow von den Driesch (1976)

GL = greatest length
Bp = greatest breadth proximal
Dp = greatest depth proximal
SD = minimum shaft diameter
Bd = greatest breadth distal
Bdf = breadth at distal fusion point
GLI = greatest length lateral side
GLm = greatest length medial side

Pig was the most commonly identified species. All parts of the body were represented, although there were biases towards the larger limb bones and parts of the skeleton less susceptible to canid scavenging. At least six pigs were represented by ulna fragments, five by the radius and four each by the os coxae, femur and metatarsals. It is possible that many of the pig bones belonged to the same animals but it was impossible to reconstruct any associated groups amongst the largely fragmentary material. The 20 pig fragments from context 39 consisted mainly of bones from the limb extremities. Trotters may, therefore, have been dumped separately without processing.

Most of this material, however, can be regarded as food remains, although only two positive butchery indentifications were made, one example is illustrated in Fig. 9, 7. A scapula bore fine cuts on its medial aspect just above the articulation with the humerus. Oblique knife cuts were also located on the medial aspect of the distal end of a humerus. Both sets of marks were probably made during disjoints of the carcass. The absence of butchery marks on other bones may simply reflect the skill of the butcher. The amount of carnivore gnawing on pig bones suggests that a lot of the material was only deposited in the pit after it had been lying on the surface and accessible to dogs. It is likely that many other bones were destroyed completely.

Ageing information was limited but tooth eruption data indicated that pigs of at least two different ages were represented. A right maxilla and left mandible both possessed deciduous cheek teeth and first molars at a relatively early stage of wear. These may have belonged to one or two animals aged between 6-12 months (see Bull and Payne 1982 for discussion of pig tooth eruption rates). Another left mandible and a right maxilla belonged to an older pig or pigs. Both the first and second molars were in wear and the third molar had erupted but was not in wear. This stage is usually not reached until at least 18 months of age.

Gnawing damage and other destructive processes had eliminated most of the epiphysal fusion data. No bones of mature animals were found, however, and this is consistent with the keeping of domestic pigs, which are mainly killed immature for their meat. The species can tolerate a relatively high rate of slaughter of young animals because of its high rates of reproduction. A very porous radius may have belonged to a foetal pig skeleton.

Metrical analysis was also restricted because of the fragmentary nature of the pig bones. The butchered humerus possessed a greatest distal breadth of 42.9 mm and a radius a greatest proximal breadth of 32.5 mm. Both these measurements are subject to substantial post-fusion growth. Therefore they are not very reliable

indicators of overall size since their proportions increase with age. The third molar in the mandible described above was 34.5 mm in length. This fits comfortably within the size range of domestic pig as opposed to the larger wild boar.

Red deer (*Cervus elaphus*) were represented mainly by antlers. Several substantial portions of stems were recovered but these are now largely in a fragmentary condition. The most complete specimen consisted of the central part of the stem and trez tine. Knife cuts were found on the stem just below the junction with the tine. Another specimen consisted of the coronet, pedicel, the lower part of the stem and bez tine. The lowest (brow) tine had been broken off and the bez tine was slightly charred. Four other antler fragments bore evidence of charring. Antlers were probably used in the digging out of the pit. Disused picks and other unwanted sections may have been dumped subsequently.

Two red deer metapodial fragments were also identified. The larger consisted of the proximal half of a slightly charred metacarpal. It possessed a greatest proximal breadth of 46.2 mm. Roe deer (*Capreolus capreolus*) was represented by a shed antler.

The faunal assemblage from pit 4 represents the dumping of the feet of a cow and the disposal of bones from at least two other cattle, six pigs and a red deer together with several sections of antler. Apart from the bones of the cattle feet, most of the material may have been lying around accessible to dogs prior to burial. Much of the material had also been in the proximity of fire at some stage. However, it seems likely that the bones in the pit were dumped over a short period of time.

The significance of the material depends on the interpretation of its context. It is possible that the assemblage included butchery and food waste from feasting activities associated with the construction or use of the monument. The deposition of pig bones, in particular on sites thought to have included a ceremonial function has been noted at Durrington Walls and other sites with Grooved Ware pottery (Richards and Thomas 1984). Another parallel can be cited from Dorchester, where many of the post-pits of the large late Neolithic monument discovered during the excavations of the Greyhound Yard site (Woodward *et al.*, 1984) contained pig limb bones; several also produced red deer antlers and a few had cattle bones in them. No sheep/goat bones were found in clear association with the use of the monument (Maltby in prep.). There remains a need to study carefully faunal remains from other later Neolithic and early Bronze Age sites of both a domestic and ceremonial nature in Wessex to investigate these patterns of disposal more widely.

THE MOLLUSC EVIDENCE

M. J. ALLEN

Introduction

The double ditched barrow unfortunately was completely ploughed-out and no old land surfaces or buried soils survived and thus evidence for the landscape history was obtained from Mollusca extracted from the ditch fills. Such deposits, however, although not ideal for palaeoenvironmental reconstruction, do provide a temporal component lacking from buried soils. Fifteen samples from the two chalk cut ditches were taken by the excavator, of which twelve were analysed for Mollusca. The aim of analysis was to establish the nature of the immediate environs of the barrow through both phases of construction and its post-construction history.

Methodology

The methods of mollusc analysis employed were those outlined by Evans (1972, 40-45). Air-dried pre-weighed samples were soaked and disaggregated in water and hydrogen peroxide (H₂O₂), the float decanted soil washed through a nest of sieves of 5.6mm, 2mm, 1mm and 0.5mm mesh aperture. Mollusca were extracted, identified and quantified using a x10 to x30 stereo-binocular microscope. The residue weights were recorded to quantify the fluctuation in coarse and fine fractions. This information provides a crude index of the rate of sedimentation which enables some evaluation of the suitability of the micro-habit for mollusc life.

The tripartite classification of ditch fills (primary, secondary and tertiary) is that described by Evans (1972, 321-328) and Limbrey (1975, 290-300). The terrestrial mollusc nomenclature follows Waldén (1976) and the results of analysis are presented in Table 10 and graphically as histograms of relative abundance, Fig. 11, in which each species is plotted as a percentage of the total individuals per sample. The burrowing, and thus palaeoecologically

insignificant, species *Cecilioides acicula* is recorded as a percentage over and above the rest of the assemblage. Percentages less than 1.5% are recorded with a cross.

Mollusca and Discussion

Mollusc preservation was extremely good and high mollusc numbers were recovered from all samples except the basal most deposits. Five samples were taken contiguously through the inner, earlier ditch (14), however the basal 10 cm was unfortunately, not sampled, Fig. 2.C A series of seven samples were taken from the outer ditch of which only one sample originated from the initial, un-recut fills of ditch 11; the remaining samples were taken in a contiguous column at 10 cm intervals through the fill of a later recut (ditch 27), see Fig. 2.C.

Inner Ditch

The inner ditch was small, only 70 cm deep and no obvious fallen turves derived from an old land surface (and thus potentially providing direct evidence of the pre-barrow environs) were observed. The primary fill consisted of a calcareous silty loam matrix with few chalk pieces and although only 24 specimens were recovered from this context it is evident that they represent a predominantly open environment and no shade-loving species were recorded. *Trichia hispida*, *Vallonia excentrica* and *Helicella itala* were the most numerous species. The assemblage is typical of open dry downland and it is evident from the total lack of any relict shade-loving species that the clearance of primary woodland must have occurred sometime prior to the construction of the ditch.

The secondary fill (16) shows no significant difference in assemblage composition. Its finer matrix enabled the survival of significantly more shells (40-276) and continues to indicate very dry xerophilic conditions.

The tertiary fill displayed subtle differences in the mollusc assemblage. Mollusc numbers are high (591) which suggest a long term stable dry grassland environment conducive to mollusc life. However, it is noticeable both in the upper portions of the secondary deposits and the tertiary fill that there is a small increase in shade-loving species from which one can tentatively suggest slightly longer, possibly not intensively grazed, grassland. This evidence is not suggestive of significant abandonment and vegetation regeneration seen in some other barrows.

The fact that this ditch was cut into a pre-existing and long established open downland indicates that its construction was far from the first anthropogenic activity in the immediate environs. Further, the total lack of relict shade-loving of species and the paucity of species commonly associated with clearance such as *Pomatias elegans* indicate that clearance was both ancient and widespread.

Outer ditch

The outer ditch (11) is broad and flat bottomed and displays evidence of being extensively recut. Only one mollusc sample (no. 8) from context 13 was taken from the original ditch fills. There is some difficulty in determining the exact temporal relationship between the sample of the early outer ditch fill and those from the later, upper fills of the inner ditch. It does seem likely however, that the inner ditch was completely silted up (to the chalk surface at least) before the outer ditch was cut.

The mollusc assemblage from the single sample of the original outer ditch deposits is essentially a xerophilic one typical of open dry grassland and, as seen in the inner ditch sequence, is dominated by *Trichia hispida*, *Pupilla muscorum* and the Vallonias. The occurrence of the common shade-loving species *Carychium tridentatum* and *Discus rotundatus* may indicate slightly longer grasses or the shade afforded by the ditch microhabitat. Once again no turf lines were observed.

Outer ditch, the recut

Unfortunately there is a major hiatus in the mollusc evidence, and thus the environmental history of this site. A later episode of ditch re-cutting removed most of the original ditch fills and thus did not enable the analysis of a sequence of the original ditch deposits. A column of six samples through the recut ditch (27) deposits were analysed. Preservation of the shells was very good and mollusc numbers were consistently high. The mollusc assemblages showed a surprising lack of variation. Once again the assemblages were overwhelmingly dominated by *Trichia hispida*, *Pupilla muscorum* and the Vallonias. This evidence indicates continuous open conditions, probably heavily grazed grassland with intermittent arable activity. The upper fill of the outer ditch (context 12) did produce

10 shells of *Ceruella virgata* which indicates the onset of Kerney's (1977) mollusc biozone 'f', i.e. medieval period. No further mollusc samples were analysed as it is evident that the open conditions discussed above existed from the Bronze Age at least, through into the medieval period.

Summary

No evidence of primary woodland was encountered and the earliest assemblage analysed indicated well established long term open downland conditions. Thus the inner ring ditch here was constructed in a previously existing long established grass downland landscape which indicates extensive, if not intensive, anthropogenic activity in the environs prior to its construction. Further, the establishment of open grassland and the existence of a completely open mollusc fauna indicates a considerable element of time since initial clearance. The barrow was therefore constructed in a long existing and managed downland.

Throughout various episodes of construction and modification of the barrow it is evident that the downland was continually managed and operated as either pasture or arable land well into historic periods.

The evidence from Barford Farm is corroborated by Evans's molluscan analysis from earthworks near Badbury Rings (1987). Here open grassland and arable contexts existed from at least the Early Bronze Age. Although Evans produced evidence of woodland regeneration in the Middle Bronze Age, this is probably local colonisation, but does indicate the presence of woodland habitats within the managed downland environment. Such habitats were however not detected at Barford Farm though the low but consistent presence of woodland species may be, in part, attributed to this refugia.

DISCUSSION

The full potential of prehistoric archaeology in this area is, gradually, being recognized. A National Trust survey of the

archaeology on the Kingston Lacy estate (Papworth, in prep.) looking at all the known data, including previously untraced aerial photographs, should prove invaluable when trying to reconstruct the local and regional context of new sites. The Barford Farm ring ditches and other sites revealed as the result of pipelaying across the estate (Addison, this volume and Maynard, forthcoming) will benefit from the insights of this research. In 1988-89 a tree planting scheme and the insertion of telephone cables along the Kingston Lacy beech avenue were also monitored for archaeological sites and revealed several features which appeared to relate to the aerial photographs accessed through this archival search (Papworth pers. comm.). The information gathered through these rescue excavations will, together with the results of the Estate Survey lead to an improved understanding of the archaeology in this locality.

The excavations and reports on the excavated data leads to a discussion of the site at Barford with reference to two main themes, the nature and significance of activities on the site which pre-date the cutting of the barrow ditches and the subsequent development and history of the barrow. The longevity of human activities in this part of Wessex will also be touched on.

ACTIVITY PRE-DATING THE RING DITCHES

The nature and significance of Pit 4 can be, to some extent, realized but only when it is seen within the fullest possible archaeological and environmental context.

Neolithic land use and occupation in this area is now reasonably well attested. Recent fieldwork has located an area of Early Neolithic activity just 1.5 km to the north-east of Barford near Lodge Farm, Kingston Lacy. This site was

TABLE 10
PSP 53.9 Mollusc Data

MOLLUSCA	SAMPLE NO. CONTEXT DEPTH WT. (g)	INNER DITCH				OUTER DITCH PRIMARY		RECUT					
		1	2	3	4	5	8	6	7	9	10	11	12
		15	16	16	16	17	13	26	25/26	25	12/25	25	12
		40-	30-	20-	10-	0-	70-	80-	70-	60-	50-	40-	30-
		50	40	30	20	10	80	90	80	70	60	50	40
		930	952	830	936	914	956	792	962	956	888	916	1000
Terrestrial Mollusca													
		+	1	4	8	4	1	3	3	8	10	7	6
	<i>Pomatias elegans</i> (Müller)	-	-	-	-	-	-	-	1	1	1	-	-
	<i>Carychium tridentatum</i> (Risso)	1	1	3	4	13	-	7	10	8	6	12	15
	<i>Cochlicopa lubrica</i> (Müller)	-	4	6	3	17	1	8	13	6	13	13	13
	<i>Cochlicopa</i> spp.	-	-	4	19	39	-	12	21	16	13	10	5
	<i>Vertigo pygmaea</i> (Draparnaud)	1	5	8	23	24	3	29	37	51	59	119	176
	<i>Pupilla muscorum</i> (Linnaeus)	-	-	2	-	-	-	-	-	-	-	-	-
	<i>Acanthinula aculeata</i> (Müller)	5	4	33	55	166	6	18	36	75	35	10	33
	<i>Vallonia costata</i> (Müller)	4	5	13	34	89	12	68	85	67	102	125	179
	<i>Vallonia excentrica</i> Sterki	-	-	1	3	31	-	4	4	5	1	2	-
	<i>Punctum pygmaeum</i> (Draparnaud)	-	-	1	1	-	1	-	-	-	-	-	-
	<i>Discus rotundatus</i> (Müller)	-	-	2	-	-8	-	-	-	-	-	-	-
	<i>Vitrina pellucida</i> (Müller)	-	-	1	3	6	-	1	1	1	-	-	1
	<i>Nesovitreia hammonis</i> (Ström)	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Aegopinella nitidula</i> (Draparnaud)	-	-	1	-	-	-	-	-	-	2	-	-
	<i>Oxychilus cellarius</i> (Müller)	-	-	-	-	-	-	-	-	-	1	1	1
	Limacidae	2	10	30	26	59	-	-	6	1	12	30	25
	<i>Cecilioides acicula</i> (Müller)	-	-	-	-	-	-	1	2	1	2	1	2
	<i>Clausilia bidentata</i> (Ström)	-	-	-	-	-	-	-	-	-	-	4	10
	<i>Ceruella virgata</i> (da Costa)	5	9	15	29	37	1	11	25	28	47	33	25
	<i>Helicella itala</i> (Linnaeus)	-	-	-	-	-	+	-	-	-	-	-	-
	<i>Helicigona lapicida</i> (Linnaeus)	8	11	61	94	157	4	67	123	127	90	109	149
	<i>Trichia hispida</i> (Linnaeus)	+	-	4	-	-	+	2	1	1	3	1	-
	<i>Cepaea</i> spp.	24	40	159	276	591	29	231	363	395	385	448	615
	TOTAL	6	7	15	11	13	8	12	15	13	15	13	12
	TAXA mollusca/kg	26	42	192	295	647	30	292	377	413	434	489	615
	% Shade-loving species	0.0	0.0	5.0	2.5	7.6	3.4	2.6	2.5	2.0	1.6	0.7	0.5
	% Catholic species	37.5	42.5	49.1	39.5	32.3	20.7	37.7	41.3	38.0	31.9	32.1	30.0
	% Open country species	62.5	57.5	45.9	58.0	60.1	75.9	69.7	56.2	60.0	66.5	67.2	69.5

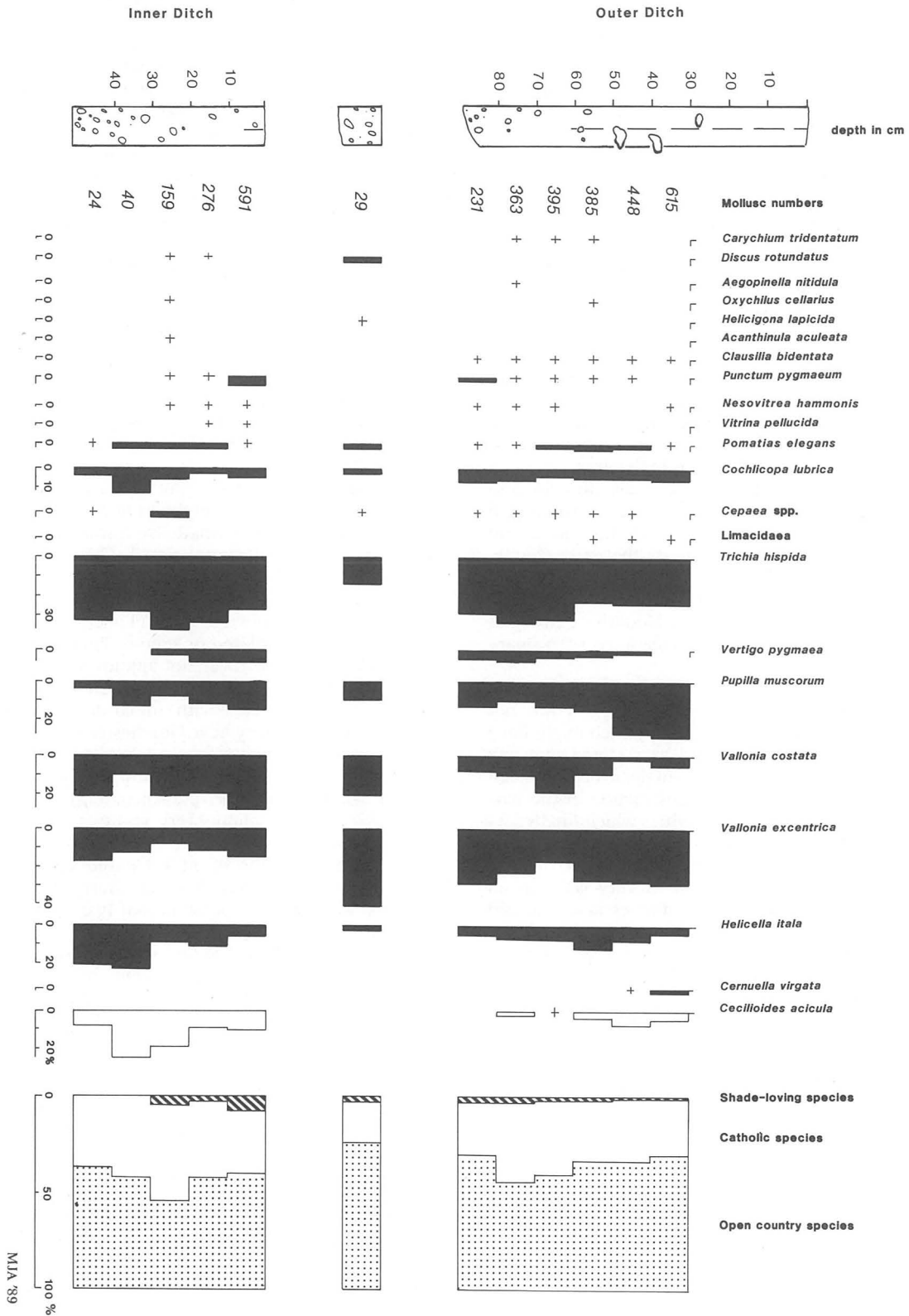


Figure 11. Mollusc data from Barford Farm.

indicated by five pits containing domestic refuse (Addison, this volume); further traces of this likely occupation site may have been destroyed by later land use. The top of the hill now enclosed by Badbury Rings Iron Age fort may have been used as a causewayed camp in Neolithic times, as was the case at Maiden Castle and Hambledon Hill. Excavations have not taken place but a low bank with the suggestion of an external ditch encircling the very top of the hill, provides unvalidated evidence. The Early Neolithic monument tradition in adjacent parts of Dorset could indicate use of such a site until at least the middle of the third millennia B.C. It is reasonable, therefore, to assume that the Later Neolithic communities were the descendents of, and knew about those who had built the long barrows and causewayed enclosures.

Later Neolithic deposits containing Grooved Ware pottery complimentary to, but of a broader stylistic array than the pottery in pit 4 have been excavated from a group of pits to the south of Chilbridge Farm, 2 km north-east of Barford, (Addison, in *Dorset Archaeology 1989*, this volume). This site was exposed in a pipetrench section but beneath .75m of hillwashed soil, and was of unknown extent. The discovery of a possible henge close to Crab Farm in Shapwick, which awaits a radio-carbon determination, and an externally banked enclosure in High Wood, Pamphill, (Papworth 1988, 141-142), could be important in explaining the patterning of other sites in the area.

Neolithic groups were active in the areas close by and probably adjacent to the site at Barford. The environmental history of the area, reconstructed from the molluscan assemblage at the ring ditches, supports the early character of the land use. The long established grassland environment, indicated by the samples from the earliest ring ditch, would suggest that the late Neolithic activity at Barford Farm took place after the clearance of primary woodland.

The area around Barford could have been one of dispersed Neolithic occupation, but unfortunately it was not possible to carry out a geophysical survey which might have provided further evidence. It should be restated that any pre-existing settlement would have been disturbed although not necessarily destroyed with the construction of the barrow. It is clear, however, that the activities which finally levelled the site down to the chalk would have removed any pre-barrow soil existing under the monument.

The visibility from and to the site is very good in all directions but the north. These ring ditches near Barford Farm lie on the southern fringe of an area bound on three sides by the River Stour and its tributaries, the Allen and the Tarrant. It is not unreasonable to think of this area as a discreet geographical territory. The site is less than .5km

Figure 12

Summary of the Environmental History

PERIOD	ARCHAEOLOGICAL ACTIVITY	ENVIRONMENT
Neolithic	Clearance	Woodland
	Pit 4	Managed Grassland
	Inner ring ditch	Pasture and arable
Middle Bronze Age	Outer ring ditch	Managed downland (pasture and arable)
Iron Age		
Romano-British	Destruction of earthwork?	
Medieval		

from the Stour. This prominent location could have been the site of, close to, or significant in relation to another untraced landmark. This spot may have been an area of some significance long before the ring ditches were dug. This suggestion is speculative, especially given that the false crest on which the site is located (Fig. 2.), is the 'classic' topographical location for a Bronze Age barrow.

The association between Later Neolithic deposits containing Grooved Ware and early Bronze Age burial sites has been acknowledged. These ceramics are found deposited in pits, post-holes or in general soils which would heave underlain an earthwork. It is rare however, in Wessex at least, for round barrows or unbroken ring ditches to be considered to be the same early date (Kinnes 1979). The debate on the coincidence between the two periods has focussed on the nature of Grooved Ware deposits and the other materials with which these ceramics have been found. Effectively two views prevail. One that Grooved Ware was an integral part of domestic life; suggesting that its occurrence at many henges is evidence for the domestic components of such sites (Wainwright and Longworth 1971). The second view is that decorated pottery styles, like Grooved Ware, might be seen in certain contexts and with specific associations, such as large quantities of pig bone and fresh flint artefacts, as possessing a special importance or character, (Bradley 1984, Richards and Thomas 1984).

The characteristics of the flint and animal bone assemblages might indicate that pit 4 was of a special nature, but the inferences that can be made from small and or isolated collections of material are restricted. The presence in pit 4 of just over 2 kg of daub, just under half of which (42%) was deposited in an aceramic layer, seems to be particularly unusual. There is no obvious parallel in deposits of a similar age and character. Isolated or semi-isolated pits containing Grooved Ware are, however, not unknown or thought to be of any particular significance (Ros Cleal, pers. comm). Comparisons can be made with similar deposits such as two pits found at Poundbury near Dorchester (Green 1987, 22), or with restricted pit groups such as those cited near Chilbridge Farm or on Wyke Down, Cranborne Chase (Barrett, Bradley and Green), forthcoming).

The absence of contemporary features on site and the fairly undistinguished nature of the Grooved Ware found, limits the interpretation of pit 4. Consequently the significance of this earliest activity in the Barford area remains somewhat obscure. It is possible that two of the unphased and eroded scoops similarly sited within the central zone of the inner ring ditch could be related to the Neolithic activity on the site rather than being elements of the Bronze Age funerary rites. The possibility that these features are not Bronze Age in date will be discussed further in the next section.

THE HISTORY OF THE BRONZE AGE BARROW

The carbon dates suggest that the first ring ditch and the burial of the infant's skeleton in pit 9 were broadly contemporary. The nature of this burial including the presence of some form of barrow mound will be considered.

The inner ring ditch was probably dug to quarry out chalk from which a mound could be built: the ditch would at the same time delimit the burial area. Estimates of chalk decay through its natural dissolution and by agricultural practices on the downlands vary (Groube and Bowden 1982). A conservative guideline might be .10 m chalk loss since the Bronze Age. The inner ditch would still have been comparatively shallow and have produced insufficient chalk rubble to create anything but a low mound.

The amount of clean and blocky chalk found in the lower part of the ditch would exceed the quantity that might be expected from natural weathering of the cut edges (Jewell and Dimbleby 1966). From this evidence it might be

concluded that the material filling the ditch was either the result of deliberate backfilling or emanated from an unstable dump of chalk rubble. Although the excavated chalk could have been piled up either internally as part of a mound or externally as a bank, neither can be demonstrated conclusively.

The environmental report has revealed that the inner ditch was dug into an established grassland landscape. This means that no large scale clearance of scrub would have been necessary, although the area might have been deturfed to facilitate the ditch cutting. There is no direct evidence for this process. If cut turves were stacked within the inner ring ditch, any chalk piled on top of the turves may have been unstable and prone to collapse within the inner ditch. This theory would provide an explanation for the predominantly clean and chalky fill of the inner ditch. Equally, if pits 8 and 9 were cut after chalk rubble had been piled up in the centre of the ring, rubble could easily have spread outwards and accumulated in the encircling ditch.

The Early Bronze Age funerary activity at Barford would appear to have been simple and quite limited in scale. The burial of a young infant was unadorned, its body interred in a gently crouched posture.

No carbon dates were acquired to date the outer ring ditch and the chronology of the later phases of the monument is imprecise. Ceramics from a primary deposit within the outer ditch cannot be securely attested to any time before the thirteenth century b.c. This means that four or five centuries could have elapsed between the primary and secondary use of the monument. The environmental report makes it clear that open dry grassland was maintained in the immediate area throughout the period during which the inner ditch filled up. The same environmental conditions prevailed at the time when primary silts were first accumulating in the outer ditch. Unfortunately the plough-levelled state of the former monument has meant that any environmental hiatus between the two events might not be represented in the mollusc data.

The excavation of the outer ring ditch would have served to considerably enlarge and emphasize the monument, perhaps to allow for the insertion of additional burials within the mound. The graded interior edge of the outer ditch suggests that a wide berm may have existed between this outer ring and the central mound. This description most typifies a bell style barrow.

Feature 7, the shallow remains of a funerary pit from which a small quantity of cremated bone was excavated, is the only undisputable evidence for secondary or tertiary burial at the Barford ring ditches. This feature may have been the site of a cremation contained within one or more of the funerary urns represented in the sherd sample. Features 5 and 6 may also represent two scars of further funerary insertions. This interpretation is useful in that these features could then be linked, in general terms, to different but not to specific elements of the ceramic assemblage. This is important as the ceramics excavated from the site incorporate a range of urn types which characteristically span several centuries of stylistic development.

The cramped layout of these assumed funerary insertions, Fig. 3, could have presented practical problems for users of the monument. Assuming that the urns in question were held upright within the barrow mound, the cutting of features 5 and 6 would have, inevitably but perhaps unwittingly, disturbed any burial inserted above feature 7, or vice versa. Since none of these shallow internal features have been phased nor can they be associated directly with specific components in the ceramic assemblage, it cannot be clarified whether or not pits 5, 6 and 7 were contemporary. In fact the evidence reaffirms the probability of the monument being used over a considerable period of time.

Feature 3, an elongated and shallow cut through the top of the inner ditch, may be all that remains of an extended

inhumation. The evidence is scanty and conjectural, but suggests the barrow mound was at least substantial enough to totally cover the inner ditch, and high enough to have housed a burial which would, presumably, have been at least half as deep as it was long. This possible burial pit is undated and it is, therefore, beyond the scope of the data to say whether or not its insertion could have been one of the last activities on the site. The orientation of the feature approximately east-west means that if the pit did contain a burial, it could have been a Christian. There is no specific evidence for this suggestion, which relies on there being significance in the orientation of feature 3. If, however, a Christian burial was inserted in the barrow mound, the site would have had to survive to a much later, post-Roman, period than has been implied from the ceramic evidence.

The cultural association between Dorset biconical urns and the users of disc barrows discussed by David Tomalin may be relevant to the style and status of the site. There is ploughed-out evidence both for and against the double ring ditches at Barford ever having been a disc barrow. It is argued here, chiefly from the patterns of silting observed in the recut area of the outer ring, context 26, that in the monument's later history the barrow was a bowl shaped construction. It is believed that the recut of the outer ditch had the effect of converting a bell shaped barrow into a more bowl shaped earthwork.

The ceramics from the site suggest that the monument may have been abandoned during the Late Bronze Age, perhaps before the local emergence of globular and barrel urns. The environmental report suggests the downland around the barrow was 'continually managed and operated as either pasture or arable land well into historic periods'. This suggests that even if the monument went out of use in the Late Bronze Age the site may have been respected for centuries, perhaps even for more than a millenia. The compact clay loam in the top .45 m the outer ditch was, as has been stated, mixed and totally without layers and is probably best equated with the destruction of the barrow. Two sherds of Black Burnished Ware from these tertiary fills provide a terminus post quem for this event of the third or fourth century A.D. This upper deposit contained a substantial quantity of waste flint which could possibly have formed a protective layer or light cairn over one or more of the funerary vessels. This theory cannot be tested and there is no other evidence for the material from which the barrow may have been constructed.

The site at Barford Farm was clearly part of a wider pre-historic landscape. Typically, these funerary areas can be traced more readily than the settlements that must have existed near-by. Fig. 1. illustrates many of the known barrow/ring ditches in the area, but information needs to be continuously updated. Two double ring ditched sites are known in the adjacent parish of Shapwick (RCHM 1975 64, Papworth 1988, 143). These sites have not been excavated so it cannot be known if their similar form is any indication of similar monument histories or functions.

The ring ditches at Barford would seem representative of a barrow in use for a great proportion of the Bronze Age which was preceded by the early clearance of the area and Late Neolithic activity on the site. This seemingly permanent area of grassland pasture, undoubtedly witnessed some cultivation in the Iron Age and Roman periods, continued to be used as medieval strip fields, and is under modern cultivation. It is hardly surprising in such a situation that standing earthworks have failed to survive the test of time.

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The Romano-British Settlement, Common Mead Lane, Gillingham, Dorset

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SUMMARY

Roman occupation debris had been noted from Common Mead Lane, Gillingham in 1869 and 1951, but the development of the site for housing in 1975 necessitated rapid excavation and fieldwork by the Shaftesbury and District Archaeological Group.

An area of some 6 ha was examined, from which unstratified artefacts verified a Durotrigian phase of the first century B.C./A.D. with thereafter apparent continuity from c. 75 A.D. to the fourth century A.D.

INTRODUCTION

The site, some 750 m west of Gillingham church, lies on the Kimmeridge Clay, which forms a ridge above the flood plain of the River Stour at c. 91 m O.D., with the Corallian limestone cropping out approximately 750 m to the west. Its position, at the confluence of the Rivers Stour, Lodden and Shreen Water, may be significant, (Fig. 1).

The settlement is adjacent to an area named Cold Harbour, with a further two fields similarly named some 4 km respectively to the north-east and north-west (Tithe Map 1841 and Apportionment 1843, Gillingham Museum). A minor Roman road runs in a north-westerly direction some 9km to the north-east, but there is no evidence for a road giving access to the Gillingham settlement or to the cemetery at Langham described below.

Roman occupation debris had been reported from the area as early as 1869 and again in 1951 (R.C.H.M. 1972, 35). Among the finds was a samian sherd with the potter's name *ADVOCISIO* (Hutchins Vol. III, 3rd ed., 1868, 662). Further trial trenches were excavated in 1984, north of the known settlement, but the area was found to be almost

entirely without archaeological features, apart from a few sherds of pottery, the negative evidence thereby suggesting that the site was undefended (Cox 1984, 118).

The Archive

All finds, apart from the coins which were given to the developers of the site, and selected items reserved for display in Gillingham and Shaftesbury Museums, recorded in the archive, have been deposited in the Dorset County Museum, with the site drawings, illustrations and relevant archival material. Site reference: CML 75/76.

Boxes to be stored are marked with the site number or are otherwise recorded as unstratified. Rims, bases and body sherds of pottery have been separated.

A part of the material collected individually was donated recently to Gillingham Museum, but other than the few items kept for display, it has been stored with the rest of the assemblage in the Dorset County Museum and marked as being on loan. Reference: CML/U/S/X.

A small quantity of samian pottery came from Gillingham Museum, apparently collected in 1974, and is now stored with the assemblage. Reference G/74/253.



Figure 1. Gillingham: town and location plan.

SITE DESCRIPTION

W. F. Moore

The area containing evidence of Romano-British occupation was divided into seven sites, although this cannot be considered the full extent as Romano-British material was observed further to the south and also to the east of Common Mead Lane.

Topsoil had been removed by mechanical excavators prior to archaeological investigation, exposing the features described below. The measurements given are approximate.

SITE 1 (Fig. 2)

There was an alignment of irregularly shaped stones, unmortared, 458 mm wide, running east-west for 2.08 m and curving northwards for a further 2.11 m. (A). A number of gaps was observed within the stones, particularly towards the western end. This linear feature would seem to represent a line of wall footings. A circular feature, (B), of 1.52 m in diameter to the west, was bordered on its northern curve by two courses of stone, approximately 250 mm higher than its upper soil filling. The central area contained a ring of stone, (C), 460 mm across and a large amount of charcoal. To the north, at the same level as the topstone course, was an area of packed, small stones, (D), forming a compact level surface, some parts of which showed signs of burning.

On the north side of the curve of the wall, remains of a second wall footing may be represented by a series of stones, (E), 430 mm wide, extending at right angles to the curve of the wall. This wall terminated before a deposit of packed, small stones (F), which covered an area approximately 1 m × 2 m, some of which were burnt.

Discussion

The area provides vestigial evidence for the remnants of more than one phase of building. (A) is most likely to be dry stone footings for a timber superstructure, although the curve in the wall could suggest that it was not structural, but a boundary wall. (C) may have been a hearth with the soil horizon representing an occupation layer.

Finds from this site included: Fig. 7, no. 2, Fig. 8, nos. 5 & 13, 2 sherds plain Rhenish ware, mortarium rim with stamp? Oxfordshire Roman ware, described below, numerous sherds of amphorae.

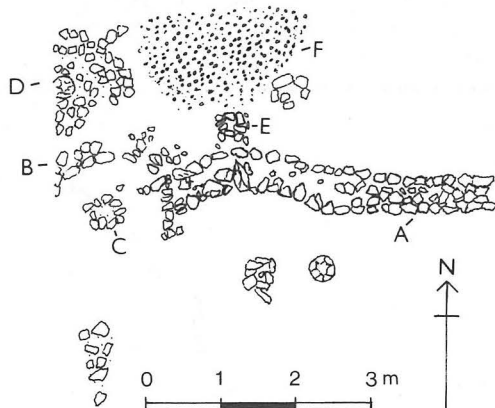
SITE 2 (Fig. 3)

An area of packed stones terminated on its southern edge in a line of larger stones, measuring at least 3 m. Of these rectangular stones, the largest measured approximately 458 mm × 305 mm × 101 mm and the smallest approximately 200 mm × 100 mm × 80 mm. Further packed stones were revealed on this southern edge but at a lower level of 153 mm.

Finds from this site included Fig. 8, nos. 3 & 7.

SITE 3 (Fig. 4)

Small groups of stones, pitched at an angle of 45°, appeared to form the footings of a rectangular structure, at least 17 m long by 8.5 m wide. The footings consisted of a single course, 850 mm wide, and were laid directly on the underlying Kimmeridge Clay, but were not continuous and had gaps, possibly as a result of robbing. There was evidence of packing between these stones, consisting of

Figure 2. *Gillingham: site 1.*

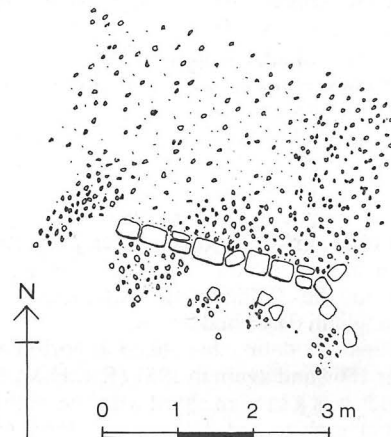
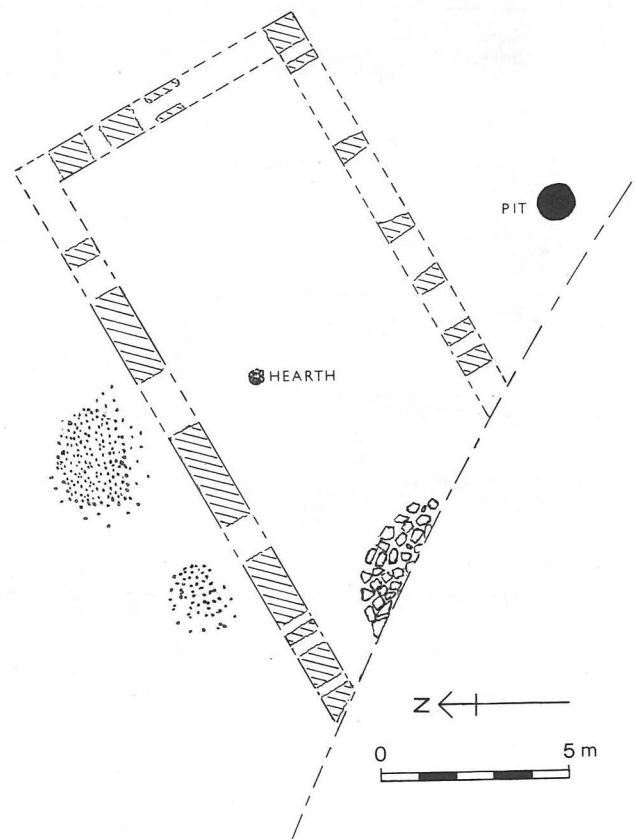
chalk and pebbles. Some of the larger stones were laid flat and measured c. 380 mm × 255 mm × 102 mm.

Other small areas of packed stone, some of which were burnt, were noted on the north-west side of this feature as well as inside. Near the south-west end, and inside the structure, an area of irregularly shaped stones, 400 mm × 120 mm × 51 mm, with worn surfaces, was revealed. A pit external to the south-east side and 1 m in diameter, contained humic soil.

Discussion

The area contained evidence for a large 'building'. All the quernstone fragments from the site, as listed, were found in the area of this feature. It was noted that the circles of burnt stone referred to in Sites 1 and 3, were comparable in size.

Finds from this site included Fig. 8, no. 12 and a sherd in T.W.A. fabric 1B, (Exeter fabric 40).

Figure 3. *Gillingham: site 2.*Figure 4. *Gillingham: site 3. The building, with part of floor and areas of packed stone outside.*

SITE 4

This area contained a single pit measuring 1.5 m in diameter. An upper fill of dark soil with stone chippings, possibly of roof tile, some with single holes c. 10 mm in diameter, was observed but not excavated. Associated with these areas were several runs of molten lead and copper alloy, but these objects are now mislaid.

Also observed, was a single, linear feature, running west to east, for at least 55 m, containing a double row of pitched stones, filling a V-shaped gully. Further similar features across the site, but with no apparent relationship to the Romano-British deposits, suggested to the author that they were post-medieval land drains.

SITE 5

A large, sub-circular depression, measuring 4 m across and up to 750 mm deep, was excavated west of Site 2. A semi-circle on the eastern edge of the depression was formed with two to three courses of stones, some of which were up to 500 mm × 250 mm in size. The stones were well worn and grooved from top to bottom. At this point, the sloping side of the depression dipped at 30°.

The lower fill of the feature consisted of a blue-grey, sticky clay, 500 mm in depth, and contained most finds. The upper fill was a yellow-brown soil, similar to the surrounding sub-soil.

Immediately south of this feature, a large area of packed stones was noted, which probably represents a silted-up pond.

Finds from this site included Fig. 8, nos. 6 & 8, and a rim sherd of first century A.D. mortarium Group I/II, described below, with the two fragments of shale.

SITE 6

Alan Farrar

This site lay south of the other sites and contained areas of cobbled stone, in part laid flat and in part overlapping.

Finds included the rim sherd of *terra nigra* and the only fragment of flue-tile.

SITE 7, BADGE HOUSE (Fig. 5)

In this area, the excavation of a single burial, exposed by pipe-laying, revealed the skeleton of an adult, (ST 80052520), orientated north-south. Near the burial were a small number of shoe studs, 1 m east of the skull, forming the outline of a shoe, 240 mm long, 85 mm across the sole and 55 mm across the heel. An iron knife or spike, 80 mm long, lay under the metacarpals of the right hand and at right angles to them, suggesting it was originally upright. Some large-headed nails were observed outside the skeleton with a cluster over the head of the right ulna, thought to be coffin nails. Fragments of Romano-British pottery lay in the upper 300 mm of the fill, some in contact with the skeleton, which probably dropped down.

Only the skull was excavated including the mandible, which has since been lost (see specialist report), and the illustration shows evidence of previous disturbance, with considerable displacement of the vertebrae, sacrum and coccyx. The remainder of the skeleton was under the foundation of a building, hence the lower limbs could not be exposed. The sex was not determined.

It is clearly Roman or post-Roman because of the pottery. Similar grave-goods have been noted in Dorset from the seventh century (Cox 1988, 38).

Finds from this site included Fig. 8, no. 4 and sherds of Roman lead-glazed ware.

FIELDWALKING

Fieldwalking in an undefined area south of Site 2, prior to the activities of the Shaftesbury and District Archaeological Group, produced pottery sherds, which are now included in the assemblage. There was also unrecorded evidence of a stone building with some stone roof tiles.

Finds from this area included Fig. 8, nos. 1, 2, 5, 9 & 14, the grey ware base and sherds with rilling described below, the rim of an amphora dated from the second half of C2 A.D. to the early C3 A.D. and half of a 'fish' dish (T.W.A. type 21).

Samian ware, Fig. 7, no. 5 and its associated sherds, came from Gillingham Museum, apparently collected in 1974, and this too has been included in the collection.

Pottery from all sites and fieldwalking

The pottery from all sites gave a date range within C1 B.C./A.D. and from c. 75 A.D. to C4 A.D. (see below).

THE SAMIAN POTTERY

B. R. Hartley

The following is a catalogue of the vessel types on site. All are unstratified, although some have been provenanced to a particular area, as recorded in the archive. The samian pottery consisted of 115 fragmented sherds, of which a few were joining.

South Gaulish Ware

Form 29. Part of the lower zone with a floating festoon enclosing leaves on a tendril springing from the top of the festoon. Similar festoons were used by several basically Neronian potters, such as Crestio, Marinus and Modestus. They were used slightly later in the Bassus-Coelus firm's work. This piece is rather coarse and does not match precisely with any of the potters named above. Probably c. A.D. 60-75.

Form 18. Neronian or early Flavian.

Form 29. The use of a scroll with a single spiral and no subsidiary fronds in the upper zone is not common. Similar scrolls were used

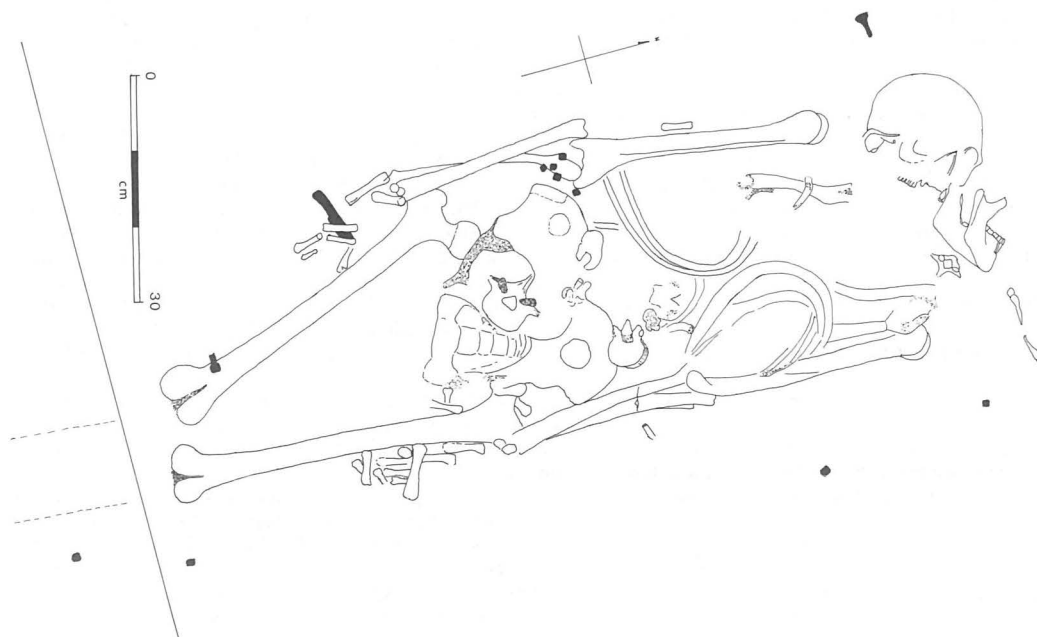


Figure 5. *The Human Bone: The skeleton, cut by the modern foundation. Black = iron nails and spike or knife by right hand.*

by Iucundus ii in the lower zone (Hartley & Dickinson 1982, fig. 44, 38) and by Vitalis ii in the upper zone, as here, on an unpublished bowl from Canterbury. *c. A.D.* 65-85.

Form 29. The triple festoons and leaves were used by Cotto and Vitalis ii of La Graufesenque. A bowl found at the pottery and stamped by Vitalis has the trifid plant here used as a pendant. For his festoons cf. Knorr 1919, Taf. 83, 16. *c. A.D.* 70-85. (Fig. 7, no. 1.)

Form 37. Two joining fragments of a bowl, slightly burnt, with a basal chevron wreath of a general type used by potters whose work occurs in the Pompeii Hoard of *A.D.* 79 (cf. Atkinson 1914). This particular wreath occurs on a bowl in the hoard, probably by Mommo (*ibid.* 57). *c. A.D.* 70-85.

Form 29. Rim. *c. A.D.* 70-85.

Form 37. With rivet-hole. The general style suggests the work of Frontinus at first glance, but he is not known to have used the plant in the wreath of the larger leaf. On the other hand, all the features do appear on bowls stamped by, or in the style of, the associated potters Calvus and Patricius of La Graufesenque, and the bowl may tentatively be assigned to them. *c. A.D.* 70-85.

Form 30. Rim. Flavian.

Form 37. A fragment of a bowl with a trident-tongued ovolo. The bowl is unusual in having square beads in its borders. Both the beads and the wreath, composed of trifid motifs, occur on a bowl at Strasbourg from a mould stamped by M. Crestio. The same motif was used as a tassel on a bowl from Heidenheim (Knorr 1912, Taf. XXII, 4). The zone of triple festoons containing spirals has many parallels on bowls from Flavian foundations (cf. *ibid.*, Taf. XX, 3). *c. A.D.* 75-95. (Fig. 7, no. 2)

Form 37. A fragment from a bowl with zonal decoration including a freestyle scene with a dog and conventional plants of the kind used on bowls in the Pompeii Hoard (e.g. Atkinson 1914, no. 54). The nearest analogy for this arrangement is from Rottweil (Knorr 1912, Taf. XXIII, 2). *c. A.D.* 75-95. (Fig. 7, no. 3.)

Form 29. Rim, probably early Flavian.

Form 36. Flavian.

Form 18. Flavian.

Form 35. Rim fragment. Flavian or early-Trajanic.

Form 18/31. Probably dish. Flavian-Trajanic.

Form 27. Two sherds. Flavian-Trajanic.

Form 27 or 35. Cup. Flavian or Trajanic.

Form Knorr 78. The surviving decoration has panels of vertical wavy lines alternating with figured panels. Flavian-Trajanic.

Form 18/31. Flavian-Trajanic.

Form 18? First century.

Form 37. Rim fragment of a bowl, with an ovolo used at La Graufesenque by M. Crestio and on a bowl from Mainz (Knorr 1952, Taf. 19A). *c. A.D.* 80-100.

Central Gaulish Ware

Form 27. Fragment of upper wall of a cup, almost certainly from Les Martres-de-Veyre and Trajanic.

Form 30. Rim. Probably from Les Martres-de-Veyre and Trajanic.

Form 30 or 37. Rim. Heavily overfired and probably from Les Martres-de-Veyre and Trajanic.

Form 37. A small fragment of a bowl, with a beaded circle replacing the ovolo, as often at Les Martres-de-Veyre, where this was made, judging by the fabric. *c. A.D.* 100-125.

Form 37. In the fabric of Les Martres-de-Veyre. Such scroll decoration is associated with the bowl-maker's stamps of Medetus, Ranto and their associates. Possibly Silvio was the mould-maker (cf. Stanfield and Simpson 1958, pl. 32, 386 etc.) *c. A.D.* 105-125.

Form 18/31. Probably from Les Martres-de-Veyre. Trajanic or early Hadrianic.

Form 18/31. Probably from Les Martres-de-Veyre. Trajanic or Hadrianic.

Form 42. A fragment of the rim from a dish, with a strap handle. Trajanic or Hadrianic.

Form 42. Base fragment of a dish from Les Martres-de-Veyre, to judge by the fabric. First third of the second century.

Form 64. Rim from Lezoux and, as usual for the form, in a rather orange fabric. Few such cups are from stamped moulds, though the fine beads and small roped 'cigar' suggest a possible connection with Drusus ii. Hadrianic.

Form 37. A small fragment (with rivet-hole) from a panelled bowl, with wavy line borders. The small double festoon contains a cockerel (D.1023) recorded only for Libertus ii, whose work this can hardly be. The adjacent panel has a double medallion, perhaps containing a bird. Too little survives to indicate the work of a particular potter, but the piece is almost certainly Hadrianic or early Antonine.

Form 18/31 or 31. Rim fragment of a dish in very pale fabric such as was sometimes used at Lezoux by Quintilianus i and his associates. Hadrianic or early-Antonine.

Form 18/31 or 31. Hadrianic or early-Antonine. (2 sherds).

Form 27. Hadrianic-Antonine.

Form 37. Burnt. The ovolo was used only by Paternus v of Lezoux, usually on his small bowls (Stanfield and Simpson 1958, p. 194).

Form 18/31. Three sherds. Hadrianic-Antonine.

Curle 15, 23 etc. with the edge of a rosette stamp of the kind typical of Lezoux. Hadrianic-Antonine.

Form 37. A fragment from a bowl, slightly burnt and with a rivet-hole. The vine scroll (Rogers M7) is on a bowl from Carlisle by the potter X-6 (May 1917, pl. VII, 91), though this is not enough for a firm attribution to him. Whoever made it, this is to be dated *c. A.D.* 125-145.

Form 37. A small fragment probably from a freestyle bowl, with a small rosette-tongued ovolo used by Sacer i on bowls from Dragonby, Lezoux and Silchester (Stanfield and Simpson 1958, pl. 82.1). The last also has the lion (D.766). Sacer's freestyle bowls, some with this ovolo but from worn moulds, occur in the Castleford Pottery shop of *A.D.* 140-150. *c. A.D.* 125-145.

Form 35. First half of the second century.

Form 37. Rim fragment of a bowl, with an ovolo used at Lezoux by Austrus, Butrio, Ianusris i. Laxtucissa, Maccius ii, Paternus iii, Secundinus iii and others. *c. A.D.* 135-160.

Form 37. A fragment with a continuous scroll and ovolo (Rogers B144), characteristic of the Cerialis ii - Cinnamus ii group at Lezoux. The bird (D.1038) is very common on bowls from this workshop. *c. A.D.* 140-170.

Form 37. A rather eroded sherd from a freestyle bowl. The mould for the bowl was stamped, upside down, at the bottom of the decoration with a plain-ware stamp PVG[NIMA] (Die 2a of Pugnus ii of Lezoux). The leaf-tips used as fillers occur on several of his stamped bowls, but the walking lion (D.757) has not previously been noted for him. Pugnus had a long career, and his decorated ware has a curiously wide range of styles. This bowl is not one of his earliest, as the stamp is one which occurs in the Wroxeter Gutter (Atkinson 1942, p.272), though it was also used on form 27. *c. A.D.* 145-165. (Fig. 7, no. 4)

Form 37. Base with the bottom of the decoration, including two impressions of the leaf (Rogers G205), only known for Priscinus. The small ring terminal to the vertical beadrow was not used by him, and suggests an Antonine potter of Lezoux, such as Iullinus.

Form 31. Stamped AL[BVCI] by Albucius ii of Lezoux (Die 6c). There are no dated sites for this die, but its frequent use on form 27 as opposed to its single record on form 79/80, suggests a date *c. A.D.* 150-165.

Form 37. A fragment of ovolo from a bowl. This ovolo (Rogers B106) was used at Lezoux by Albucius ii and Paternus v. *c. A.D.* 150-190.

Form 37. Two rims, one with an ovolo (Rogers B102), used by Advocisus of Lezoux and his associates. The other fragment has a festoon and beads characteristic of Advocisus, and as the fabric matches, it seems that the sherds are almost certainly from the same bowl. *c. A.D.* 160-190.

Form 37. With an ovolo (Rogers B102) used by Advocisus, Clemens, Martio Priscus of Lezoux. The small neat beads suggest the work of Advocisus. *c. A.D.* 160-190.

Form 37. Sixteen sherds, some joining, with repairs using fish-tail cramps. The bowl is stamped in the freestyle decoration with the large, retrograde, ligatured stamp of Paternus v of Lezoux (Die 7a). The ovolo (Rogers B178) is very uncommon, but has been recorded once before on a stamped bowl. The animals include: panther to left (0.1546), goat (0.1842), panther to right (0.1509), but with an added tail, implying that the original one had broken off the die, stag (0.1732A), boar (0.1674) and dog (0.1917), all previously known to have been used by Paternus. The ovolo apart, the decoration is standard for Paternus, and there is nothing to point to a closer date within the range *A.D.* 160-195, although no doubt the ovolo was used only for a year or two at the most. (Fig. 7, no. 5)

Form 37. A fragment from a decorated bowl with a double medallion, poorly impressed. The triton was used at Lezoux by Doecus i on a bowl from Chester. He also used the eight-petalled rosette (Rogers C170) on a stamped bowl from Chesters (Stanfield and Simpson, 1958 11, 148, 25). *A.D.* 160-190.

Form 30. Badly moulded. The freestyle decoration with blurred dog is reminiscent of the work of Paternus v of Lezoux, and is certainly of the same general date. *c. A.D.* 160-200.

Form 31. Early to mid-Antonine.

Form 31. Thirteen sherds, two of the same dish. Antonine.
 Flake. Antonine.
 Form 38. Two flanges. Antonine.
 Form 33. Antonine.
 Form 30 or 37. Rim. Antonine.
 Form 31. Two sherds, slightly burnt. Antonine.
 Form 31. With rivet-hole. Antonine.
 Form 37. Rim and top of the ovolo, with rivet-hole. Antonine.
 Form 37. The fragment of ovolo is not identifiable. Antonine.
 Unidentified form probably Central Gaulish.
 Form 31. A burnt fragment of a dish. Antonine.
 Form 31. Slightly burnt. Mid- to late-Antonine.
 Form 31. Two sherds. Mid- to late-Antonine.
 Form 33. Central or East Gaulish (Rheinzaubern). Antonine.
 Form 31R. With rivet-hole. Mid- to late-Antonine.
 Form 36. Mid- to late-Antonine.
 Form 30 or 37. Rim. Mid- to late-Antonine.
 Form 31. With rivet-hole. Mid- to late-Antonine.
 Form 30 or 37. Rim. Antonine, probably late in the period.

East Gaulish Ware

Form 38. Flange. Mid- to late-Antonine.
 Form 31R. Late second- or early third-century.
 Form 36. Late second- or early third-century.
 Form 32, etc. Footring. Late second- or early third-century.
 Forms 36 and 31. Two sherds. Late second- or early third-century.
 Form 31 (Ludowici Sa). Fragment of a dish in a pale orange fabric with patchy orangy slip, perhaps from Trier. Probably early third-century.
 Form 31. Almost certainly from Trier. Probably early third-century.

COMMENT

Such a small collection does not allow much scope for comment. The South Gaulish ware is all from La Graufesenque, so far as one can judge from the fabrics and decoration. It implies Flavian activity on the site, from A.D. 85 at the very latest.

Eight sherds from Les Martres-de-Veyre attest Trajanic use of the site. Except for six sherds, the rest of the samian is from elsewhere in Central Gaul, almost certainly all from Lezoux. Some is

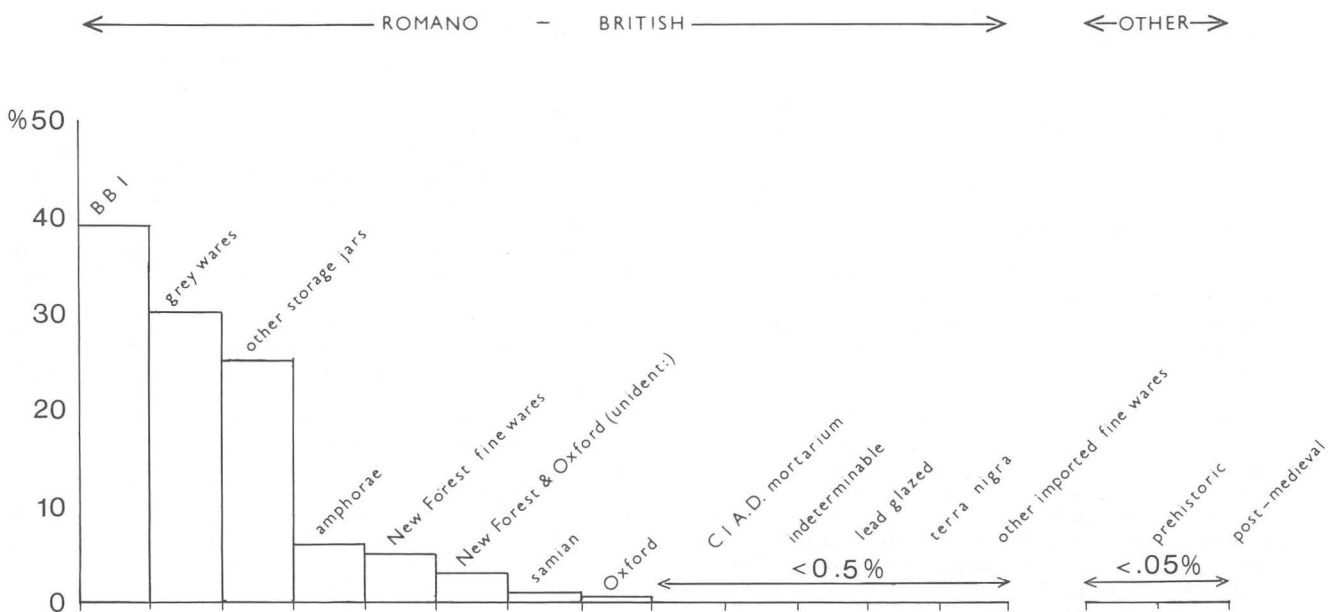


Figure 6. The Pottery: histogram of percentage weight.

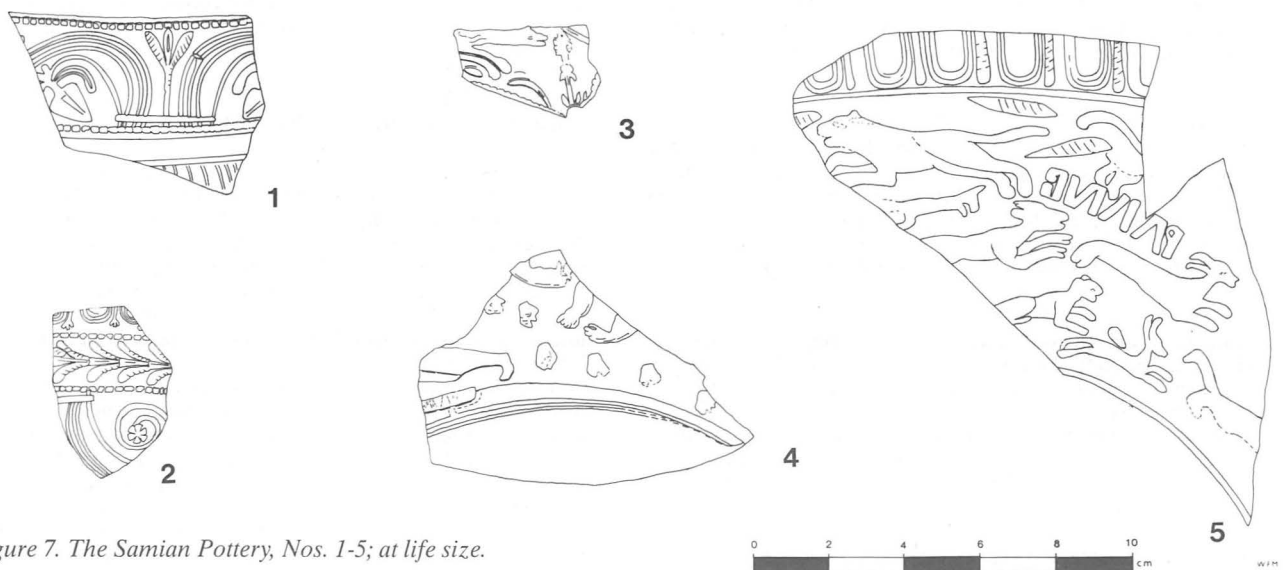


Figure 7. The Samian Pottery, Nos. 1-5; at life size.

Hadrianic or early-Antonine, but the main period at which samian was being discarded on the site fell after about A.D. 150, and probably continued for some decades. It is difficult to be sure whether the small amount of East Gaulish ware is significant chronologically, but certainly there are only six sherds from there which are likely to be third-century.

THE POTTERY: INTRODUCTION

M. S. Ross

The assemblage comprised some 92 kg of pottery sherds, the bulk of which was coarse ware, the large proportion of grey wares competing well with the black-burnished wares (Fig. 6). The proportion of grey wares is greater than in south Dorset (Jo Draper, pers. comm.), there being no local collection for comparison.

It was mostly fragmented and very abraded, making separation difficult although unstratified, material was collected from seven known and two unknown areas on the site, which are recorded in the archive.

A wide variety of fabrics was noted, dated within the first century B.C./A.D. and from c. 75 A.D. to the fourth century A.D., except for a tiny sherd, thought to be of Glastonbury ware, which might be dated to c. 400 B.C., although continuing in use to the first century B.C. The presence of the small amount of Durotrigian pottery is significant as are the few sherds of early fine wares.

The identification of pottery types and the percentage of their weight is shown in Fig. 6.

THE GALLO-BELGIC WARE

A small rim sherd of micaceous *terra nigra* was identified in a dark grey/brown, fine, smooth fabric with reddened core, and is thought to be of Central Gaulish origin. It is not possible to suggest the vessel form. The lack of classification of this fabric is due to the several varieties existing. It occurs infrequently in Britain and is often associated with pre-Conquest groups (Woodward 1987, 74).

THE CENTRAL GAULISH IMPORTED WARES

Two sherds probably from a beaker with barbotine 'hair-pin' decoration and dated A.D. 70-140 (Susan Davies, pers. comm.).

Two rim sherds from Central Gaul of Rhenish ware dated A.D. 150-200.

THE ROMANO-BRITISH LEAD-GLAZED POTTERY

Five fragments of wheel-turned Roman lead-glazed ware included one rim and a sherd with 'wave' pattern decoration (Arthur 1978, Fig. 8.6). The fine, characteristic orange fabric is slightly micaceous with occasional grog and dark specks, possibly of iron oxide, appearing through the glaze. These sherds are likely to be from the South-Central English Group, mostly distributed in Wiltshire, Hampshire and along the Avon valley and can be dated from the late first century to the early second century A.D. (*ibid.* 312-7).

THE MORTARIA, FIRST CENTURY A.D.

A rim sherd from a first century type of Group I or II made by continental potters Q. Valerius Se- or Q. Valerius Veranium, probably working in Britain. The sherd is in a fine, creamy/buff fabric with occasional angular quartz grits, but the stamp is poor or so abraded as to be illegible. Trituration grits were not visible. Because this example only shows the lip of the spout, the rim form cannot be determined, although it can be dated to A.D. 65-100 (Hartley 1977, 5-16).

THE NEW FOREST FINE WARE

A total of 4.5 kg of New Forest fine ware sherds has been recorded, 5% of the total assemblage. This description applies to fabrics in which there is no obvious quartz tempering, apart from the Parchment ware. The vessels have overall coloured slips and sometimes painted or incised decoration. The kilns are dated from 270-400+ A.D. The following fabrics have been identified from Fulford's classification (1975a).

Fabric 1a. An iron-rich paste with only occasional inclusions and usually reduced to light or dark grey in the firing. Slip varies from light, reddish-yellow to reddish-browns, red or purple. It is used for vessels such as beakers, flasks, flagons and jug types. (Types 1-58 and sherds A-E).

Fabric 1b & c. Similar to the previous one but oxidised and not generally so highly fired, with a reddish-yellow to a reddish-brown slip. Its use is confined to bowl forms. (Types 59-85). The slight variations between fabrics 1a & b has not been distinguished in this case.

Fabric 2a. Parchment ware: A white or off-white fabric with

medium quartz tempering. Vessels can have a deep red or purple slip or brown painted motifs.

Fabric 2b. A very fine, white or off-white, iron-free paste, which can be confused with Oxfordshire 'parchment' fabric, except for mortaria grits.

The following rim sherds have been classified. As with the Oxfordshire pottery, the small size, loss of colour-coat and general abrasion of the sherds made it difficult to distinguish the various forms. The numbers of the various types are shown in parentheses. *Closed forms and beakers.* (*Fabric 1a*): Type 2.5 (1) c. 300-30; Type 12.1 (1) c. 300-70; Type 16.1 (1) c. 300-30; Type 18.2 (1) c. 320-70; Type 42.1 (1) c. 300-30/40 (Half vessel); Unidentified beaker rims (53).

Decorated sherds: Painted motifs nos. 20, 21, 19 & 34; Decoration types A2, A3, B, D1 & E2.

Red-slipped bowls. (*Fabric 1b & c*): As type 59 (2); 59.2 (1, half vessel); 59.2 (2); c. 320-400; As type 61 (1) c. 340-70; Type 63.1 (1) pre-280; As type 67 (1); 67.6 (1); c. 300-70; As type 68 (2) pre-350; As type 69 (1); c. 320-40; As type 73 (1), with rosette stamps; c. 345-80.

Mortaria. (*Fabric 1b & c*): As type 75 (1); c. 345-80; Type 81.4 (1); c. 345-80; Unidentified: Rims (2); Flagon neck (1).

Parchment Ware. (*Fabric 2a*): Bowl; As type 89.2 (4 +1 sherd); c. 270-400.

Mortaria: As type 102 (1); c. 270-c. 350; Type 105 (1), with incised 'wavy' decoration on flange; c. 270-c. 350.

Mortarium. (*Fabric 2b*): Type 104.1 (1); c. 300-20 to c. 380.

THE NEW FOREST GREY WARE

With the exception of Fig. 8, nos. 2, 6 & 7 and the base and sherds with external rilling, all the grey wares have been attributed to the New Forest kilns and formed 30% of the total pottery, weighing 27.6 kg. These wares are distinguished by their reduced grey or grey/brown, sandy fabric, in contrast to the colour-coated forms. Slip and burnishing was used, but there is little evidence remaining on the mostly fragmented sherds reviewed here. The kilns date from c. 270-400 A.D.

From the material analysed, the dominant types are the everted rim storage jars (type 30) and the large storage jars (type 40), with a smaller number of closed jars (type 35) and jugs (type 20), (Fulford 1975a).

The following is a list of types as classified by Fulford, with the numbers of each type in parentheses.

Bowl: As type 17 (1); c. 300-50.

Jugs: As type 20 (1); 20.2 (3); 20.3 (1); 20.4 (3); 20.6 (2); c. 270-350.

Jars: As type 24 (1); 24.2 (5); c. 270-350; 25 (1); 25.3 (4, one vessel); c. 270-350; 27/28 (1); 28.1 (1); 28.2 (1); c. 270-350; 30 (2); 30.1 (1); 30.3 (1); 30.5 (7); 30.6 (12, with 3 smaller types; 30.10 (1); c. 270+; 31 (3); 31.1 (1); 31.2 (3); c. 270-400; Type 32.4 (1); c. 270-350; 33.1 (2, one vessel) c. 270-350; As type 34 (1); c. 270-350; 35 (6); 35.1 (1); 35.2 (3); (One rim of type 35.2 showed slightly scored chevron pattern but no white slip) c. 270-350; 40 (19); 40.1 (4); 40.3 (5); 40.4 (3); 40.5 (4); (All hand-made) c. 270-400; Unidentified rims: (48).

Handles: As type 17 (3); 17.3 (1); c. 300-50; 18 (1); c. 270-350; 20 (3); c. 270-350; Unidentified: (3).

Decoration: Forms seen on small, fragmentary sherds included piercing, heavily incised lattice, applied cordons, incised concentric circles, inverted sloping Vs, scored parallel lines, rouletted and 'wave' pattern.

OTHER GREY WARES

Unidentified grey wares, not thought to be from the New Forest kilns.

Bases: Possibly of a beaker, in a very hard, highly-fired, grey smooth fabric, with pronounced throwing rings internally. It is similar to, though not so highly fired as, Fabric E from Applegates, Dorchester, the only one of its type known from the town in a context of c. 80-85 A.D. (Draper, forthcoming). (Fig. 8, no. 6)

Base of a flat-based vessel or jar with external rilling on the body and seven sherds similarly decorated. This treatment has been noted from the Alice Holt/Farnham Roman pottery industry (Lyne & Jefferies 1979, 37).

Jar or Flagon: About half of a reconstructed, wheel-made jar or flagon, with a 'speckled' grey appearance, no evidence of a handle or rim and at least 25 mm high and similarly at its maximum diameter. The slightly rough fabric was white predominately, heavily tempered with fine, sub-angular quartz grits, less than 0.25 mm but occasionally up to 3 mm across. The 'speckled' effect seemed to be produced by the dark appearance of the grits, although some areas had a blacker, smudged look suggesting it was due to a slip. The

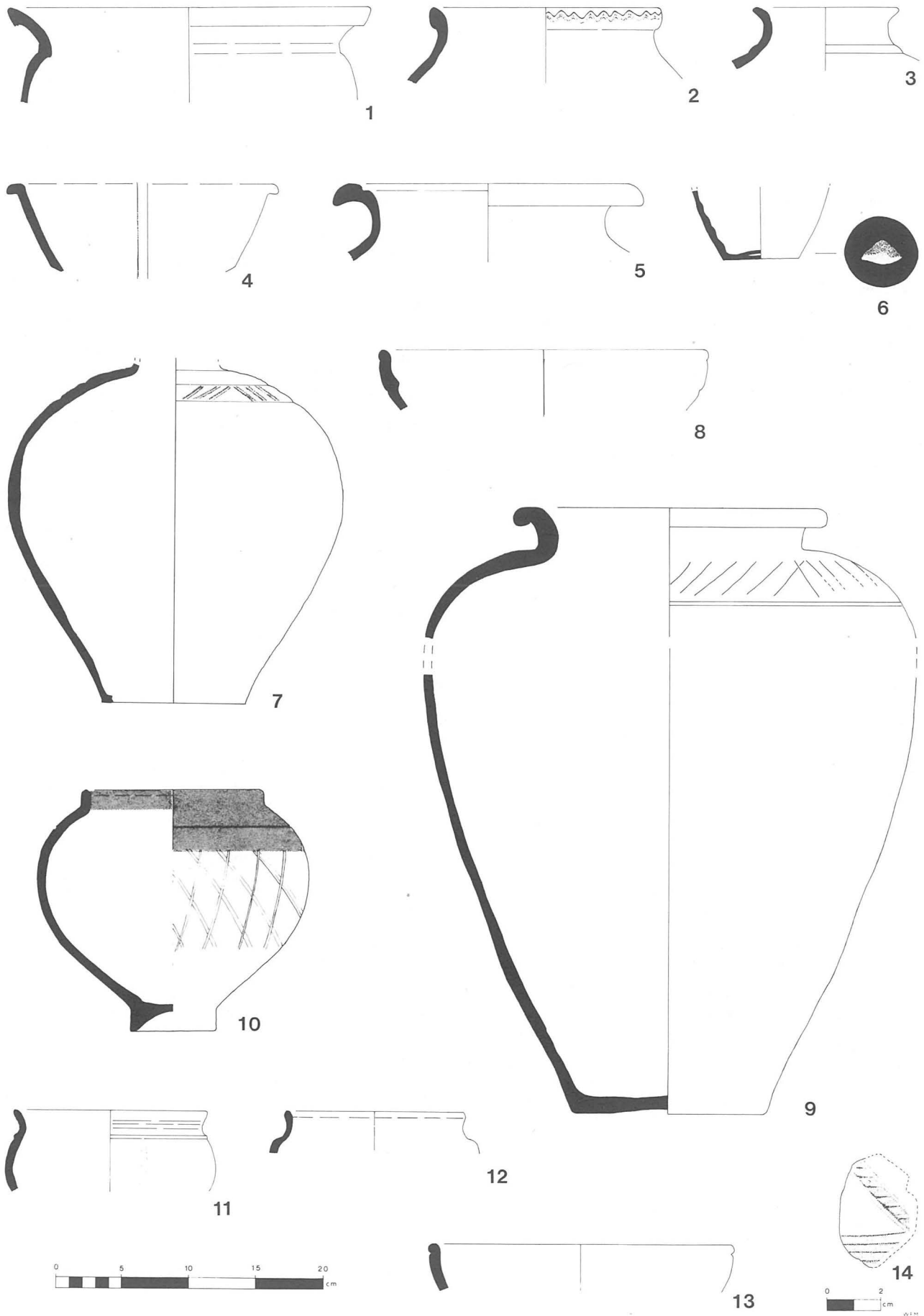


Figure 8. The Grey Wares, Nos. 1-7; ?The Oxfordshire Roman Ware, No. 8; The Coarse Storage Jar, No. 9; The Durotrigian and Romano-British Wares, Nos. 10-13; at $\frac{1}{4}$ life size; The Glastonbury Ware Sherd, No. 14; at life size.

interior was similar with possible wiping. The form has not been paralleled elsewhere. Light scoring of opposing diagonals was evident on the lower cordon (Fig. 8, no. 7).

The New Forest grey ware and unidentified grey ware: Illustrated vessels, Fig. 8.

- 1 Fulford typology no. 30, a slightly everted, wedge-shaped rim.
- 2 Large storage jar rim, with little neck folded over, pulled bead rim and incised 'wavy' line on upper edge, wheel-made.
- 3 Jar with closed mouth, upright neck, simple out-turned rim and cordon at shoulder.
- 4 Flanged rim bowl or dish, with chamfered base, as in black-burnished ware, T.W.A. typology type 23.
- 5 Large upright rim, sharply hooked with wide interior lid-seating.

THE OXFORDSHIRE ROMAN WARE

These wares formed 0.7% of the assemblage and weighed 0.6 kg. From Young's catalogue (1977), both iron-rich and iron-free clays were used with variable tempering, according to the fabric, of which only those identified in the assemblage are described. The date range of the kilns is from A.D. 240-400+.

The Fabrics

The White Wares

No. 2 Parchment Ware: Recognisable as a hard, sandy fabric with sometimes red and black inclusions, coloured from white to pink or light orange. A distinctive smooth surface with the firing, gives the fabric a parchment-like colour. Red painted decoration was sometimes added, though not seen in these examples.

No. 3 Fine and Coarse White Wares: Two hard, fine or less-fine, white or pale cream fabrics, sometimes with visible tempering and a smooth exterior, with the interior of the vessel in closed forms, showing very sharp ridging.

The Oxidised Wares

No. 2 Red and Brown Colour-Coated Wares: A hard, sandy, often micaceous fabric with small black/red inclusions and occasional lumps of chalk. The colour is variable from buff/orange, red and red/brown, with often a grey core. Mortaria trituration grits are translucent in various colours from white through to black, according to the firing. In all cases, the colour-coat had virtually disappeared.

The following rim sherds were identified from Young's catalogue. The mortaria were confirmed by their rounded trituration grits. Separation from New Forest forms was almost impossible due to the small size of the rims and the loss of their colour-coat. The numbers of the various types are shown in parentheses.

Parchment Ware (Fabric no. 2): Type P24.17 (1); c.240-400; (The visible quartz tempering suggest that this could be a white coarse ware (No. 3 above), a copy of type W57, a variant of Type P24; c. 240-400).

Colour-Coated Ware (Fabric no. 2)

Mortaria: As type C97 (1); C97.1 (2); c. 240-400+; C100 (1); C100.2 (1); C100.4 (1); C100.8 (2); c. 300-400+; Unidentified, but assumed to be from the Oxford kilns: Mortarium rim with wide, curving flange and illegible square stamp, (30 mm), in a bright red, smooth, non-micaceous fabric, with no visible trituration grits. Stamping of mortaria in the Oxford region was common in the first and second centuries A.D., but no similar stamp was illustrated. (*ibid.* 57-8).

Beakers: As type C23 (1), with 3 sherds; c. 270-400.

Bowls: Type C41.2 (1); c. 300-400+; C42.1 (1) undated; As type C46 (1); c. 270-400; C51 (1); c. 240-400+; Unidentified but assumed to be from the Oxford kilns: Two sherds in a bright orange/red colour, others red/brown with grey core, in a slightly rough, micaceous fabric, tempered with variable quartz grains and some small black inclusions. The sherds have two grooves below the bead rim with a marked internal flange. (Fig. 8, no. 8). Possibly 3 vessels, 5 rims and 1 sherd.

THE IMPORTED COARSE WARE, AMPHORAE

Sherds thought to be from amphorae represented 6% of the total and weighed 6kg. Dr. D. F. Williams identified a bodysherd from the globular-shaped amphora type Dressel 20, a type used to transport by sea, olive-oil from the southern Spanish province of Baetica, and made along the banks of the River Guadalquivir and its tributaries between Seville and Cordoba (Peacock and Williams, 1986).

It is the most common amphorae type imported into Roman Britain (Williams and Peacock, 1983) and is dated from the late C1 B.C. to the late C3 A.D. A rim from the same form was found to be similar to Type nos. 36 and 137 at Augst dated from the second half

of C2 A.D. to the early C3 A.D. (Martin-Kilcher, 1983).

OTHER STORAGE JARS

Other coarse-ware storage vessels comprised 15% of the total assemblage, and weighed 13.8 kg. Visually there appeared to be three differing types, based on colour. Thin sectioning and study under the petrological microscope by Dr. D. F. Williams gave the following identification:

1 A thick, everted rim of a large ? storage jar in a fairly hard, rough fabric had frequent argillaceous inclusions scattered throughout, with reddish-yellow surfaces (Munsell 5YR 7/6 - 7/8) light red (10R 6/8) core. The rim was thicker than that illustrated in Fig. 8, no. 9, below.

2 Six rims and a reconstruction of body sherds of about one-third of a vessel in what was a visually dull, reddish fabric. Description and thin sectioning of a bodysherd by Dr. Williams, was that it was from a large vessel in a rough, hard, fairly thin-walled, sandy fabric, which also contained some argillaceous material, dark grey (7.5YR N5) surfaces, lighter grey core, sandwiched between two thin red layers. In this case, and the rim described above, the most prominent non-plastic inclusions were made up of what appeared to be angular fragments of grog. The remaining inclusions were mostly quartz, fairly small in size for the bodysherd and larger-sized for the rim above. Hand-made grog-tempered jars are found at a number of Roman sites throughout southern Britain during the late third and fourth centuries A.D., (Fulford 1975b; Green, forthcoming).

3 Eight rims, three of which were reconstructed with some half of a vessel. (Fig. 8, no. 9). A bodysherd was described by Dr. Williams as a fairly hard, thick, rough fabric light grey in colour (5YR 7/1). Thin sectioning showed a groundmass of well-sorted quartz grains mainly under 0.10 mm in size, some flecks of mica and a scatter of ? shale-like inclusions or possibly grog. If the inclusions were of shale, it is possible that the pottery may have been made locally, as Gillingham is situated on the Kimmeridge Clay, which contains pieces of shale. There is, however, no evidence of pottery kilns in the area during the Roman period. This grey fabric does not occur in Dorchester (Jo Draper, pers. comm.) and has not been identified elsewhere, apart from one sherd seen among material from Shepton Mallet Museum, Somerset, a former early kiln site, although their size and fragility would suggest that they did not come from far afield.

THE GLASTONBURY WARE

A single body sherd, thought to be of this ware, was in a mid-brown fabric with smooth outer surface, part-blackened externally, possibly burnt, with very numerous non-calcareous, angular inclusions and geometrical rouletted decoration. From purely visual examination and without petrological analysis, this would seem to be from a bowl or jar of Glastonbury ware, possibly from Group I (Gabbro), originating in the Lizard Head area of Cornwall (Peacock 1969, 44-54), and dated c. 400 B.C., with use continuing into C1 B.C. (Cunliffe 1987, 315). (Fig. 8, no. 14).

THE DUOTRIGIAN AND ROMANO-BRITISH BLACK-BURNISHED WARE

These wares formed 38% of the assemblage and weighed 34.8 kg in total. With few exceptions, they were generally small and abraded, making separation into recognisable types difficult.

It has not been possible to find exact parallels for the Durotrigian pottery as the forms are likely to be locally distributed variations, assumed to be from Purbeck, but they can, nevertheless, be dated within C1 B.C. to C1 A.D.

The black-burnished ware has been classified according to the type series of the Trust for Wessex Archaeology, 'Black-Burnished Ware Series for Dorset', (in preparation), and gives a date range within C1 B.C./A.D. and from c. 75 A.D. to C4 A.D.

The fabric follows the description given by Williams (1977, 173, 189) for black-burnished ware. There was generally little elaborate surface treatment, sherds were not highly burnished and showed little evidence of slip, which is most usual in the late third and fourth centuries. A few sherds were oxidised orange or reddish/brown and heavy wiping was seen on certain vessels. Decorative motifs noted were typical of the vessels represented, as described below. The numbers of the various types are shown in parentheses.

Durotrigian Vessels

A pedestal bowl, probably hand-made, about 30% restored, was in a hard fabric with well-sorted numerous quartz inclusions,

black/brown exterior, reddish in parts with grey interior, external burnishing to top of shoulder and inside rim, otherwise a slightly rough surface. The acute lattice decoration shows one, two and three intersecting lines (Fig. 8, no. 10).

Five rim sherds, from two vessels, of a wheel-made hollow-necked bowl, decorated with applied cordon at the junction of the neck and shoulder and vertical ribs on the body. The fabric is smooth and hard, with fine quartz tempering, burnished black externally and inside the rim, otherwise brown to grey externally, with grey core and interior. This form is characteristic of the LIA Hengistbury Class B bowls. At Gussage All Saints, fabric analysis found these bowls to be British-made copies, originating in the same areas as typically Durotrigian pottery, dated in a LIA context (Wainwright 1979, 64), (Fig. 8, no. 11).

Rim of a small-necked bowl, with a hint of internal groove on rim, in a fine, hard, smooth fabric, burnished on exterior, core and interior grey, with very fine quartz tempering. Similar to forms at Hengistbury Head, as a local product copying imports (Cunliffe 1987, i11: 176, BD4.4). (Fig. 8, no. 12).

Rim of a bead rim bowl and seven other similar fragments, in a brown, fine fabric with reddened core, not burnished. Similar to vessels in the Allard's Quarry, Marnhull collection (Dorset County Museum). (Fig. 8, no. 13).

Vessels identified from the T.W.A. series:

Jars: Type 1 (34) 4 are one vessel, 4 with decoration type 15 on neck, 4 reddish/brown. C1 B.C.-C1 A.D.; 2 (24) 1 with decoration type 15 on neck, 1 orange. C2 A.D.; 2/3 (56) This category is used when not enough of the vessel survives to place it in either type 2 or 3. C2 A.D.-C3 A.D. onwards; 3 (3) Late C3 onwards; 6 (5) C1 B.C.-C1 A.D.; 7/8 (6) Not enough of the vessels survive to differentiate from type 16. C1 B.C.-C1 A.D.; 8 (10) C1 A.D. - later C3 A.D.; 9 (14) An almost complete vessel with type 206 handles. Late C1 A.D. - early C2 A.D. but in Dorset to C3 and C4 A.D.; 12 (4) Noticeably oxidised, with heavy wiping internally and externally. Copy of coarse wares such as New Forest. Late C3-C4 A.D.; 47 (1) Up to C3 A.D.

Open bowls with rounded bodies: Type 13 (3) In Dorset C2-C3 A.D.; 15 (1) Maiden castle type (Wheeler 1943, fig. 72, 171-181); C1 B.C.-C2 A.D.; 16 (1) C1 B.C.-C2 A.D.; 18 (2) C3-C4 A.D., into sub-Roman period.

Straight-sided bowls and dishes: Type 20 (61) 5 with decoration type 17, 1 reddish/orange. Late C1 A.D. - later C4 A.D.; 21 (37) The small size of the sherds of this oval dish made it difficult to separate from the round dish, type 20 (above). 2 with decoration type 17 externally, 1 orange. Half a complete 'fish' dish of this type, interior with 'arcading' decoration type 67. Late C3 A.D. - late C4 A.D.; Type 22 (25) Mid-C2 ending before C3 A.D.; 24 (20) c. A.D. 200 or mid- to late-C2 A.D., possibly into C3 A.D.; 25 (106) Development of types 22 and 24. Some sherds heavily wiped, 11, reddish/orange, 4 with decoration type 17 externally. Late C3-C4 A.D. in Dorchester.

Lids: Type 26 (4) Lid or type 13 bowl, sherds too small to differentiate. C1 and C2 A.D., but later group classified to C3 and C4 A.D. (Woodward 1987, Fig. 47, 117-129) although different forms. One sherd of fine-grained fabric with slip is identified as T.W.A. fabric 1B, similar to fabric 40 described from the Legionary Fortress, Exeter (Bidwell 1977, 189). A sherd in the same fabric was seen in the collection from Allard's Quarry, Marnhull (Dorset County Museum). Provenance unknown but outside the Wareham/Poole Harbour area, from C1-C2 A.D., (Rachel Seager Smith, pers. comm.).

Beakers: Type 27 (1) C3-C4 A.D.; 29 (5) Throughout the Roman period, copying either C1 A.D. imported vessels or New Forest or Oxfordshire forms. C3 and C4 A.D.

Handles: Type 201 (5); 202 (3); 204 (3) Countersunk, Durotrigian derivation. C1 B.C.-C1 A.D.; 206 (8); 207 (1); Unidentified (13).

Decorated sherds other than those rims already described, some very small: Acute lattice (24); Concentric grooves (4); Concentric grooves with intersecting scored lines (4); Pierced base (1); perforated sherd (1); Chevron scoring (2); Base (1); scored circle with intersecting lines.

THE POST-MEDIEVAL POTTERY

Lead-glazed pottery sherds? C16 (3); Verwood type pottery sherds, C17-20; Delft ware sherd, (1); Miscellaneous pipe stems.

THE COINS

Hadrian Denarius reverse uncertain
Antoninus Pius Sestertius (possibly irregular)

Marcus Aurelius	RIC (Ant Pius) 154-5; (M Aurel) 861 or 896, 964
Lucilla	Sestertius reverse uncertain, Dupondius or As reverse seated figure
Geta	Denarius reverse uncertain
Severus Alexander (?)	Denarius reverse illegible
Gallienus	RIC 160, 192a, reverse uncertain
Claudius II	RIC 34, reverse uncertain
Tetricus I	RIC as 68, 100, 121, as 140
Tetricus II	RIC 260
Barbarous Radiates	Reverse from Pax (1), illegible (2)
Carausius	Reverse uncertain
Alllectus	RIC 33
Maximian I	Follis (294-305)
Licinius I	Reverse uncertain (313-320)
Constantine I	RIC 7 as London 154; HK 186; reverses possibly Soli Invicto Comiti (1), Gloria Exercitus (2). Reverse uncertain (317-326)
Crispus	HK 363
Constantine II	HK as 112(2)
Helena	HK as 51(2)
Urbs Roma	HK copy as 52
Constantinopolis	HK 140, copy of 158; CK 35
Constans	CK as 25 (2), as 72, as 77, 252
Constantius II	CK as 73
Constantius Gallus	RIC 7 as London 154, as London 199; as HK 48
House of Constantine	Reverse uncertain (350-3)
Magnentius	Silver: RIC 8 as Lyon 218
Julian	CK as 483
Valens	CK as 503
Gratian	CK as 96, as 319
House of Valentinian	

COMMENT

Richard Reece

While it has been necessary in putting this list together to make a few guesses or assumptions about coins that were only partially recorded, the result is of reasonable reliability and makes good sense. It gives continuity from the mid-second century to the last quarter of the fourth century, and shows no obvious gaps. Unfortunately the very normality of this list, highly comparable with many other sites in the countryside of Roman Britain, makes it impossible to draw out lively historical details. The absence of earlier coins, struck from A.D. 50 to 130 is not surprising, and the absence of coins of the House of Theodosius (388-402) is probably not ground for deep speculation.

THE BROOCHES

A Polden Hill type copper alloy brooch, dated to the second half of the first century A.D. Although slightly damaged and the pin broken, this type was identified by the way in which the bar was anchored and the flat moulding extruded each side at the top of the bow (Hattatt 1982, 69). (Fig. 9, no. 1).

A brooch pin, possibly from a fibula, 45 mm long.

Two second century bronze brooches, one with plain bow fibula and the other with enamelled cross bow, were reported to have been found by metal-detector users when the site was being developed.

THE COPPER ALLOY OBJECTS

Nail cleaner, double-ended, 50 mm × 4 mm. (Fig. 9, no. 2).

Bracelet fragment of twisted wire, two strands round a core, 40 mm long. (Fig. 9, no. 3).

Two flat bracelet fragments with grooved decoration, but not showing the design which would give dating evidence, 50 mm and 30 mm long respectively.

Simple ring, incomplete, 8 mm at its widest, no evidence of gem stones, but not necessarily Roman.

Other miscellaneous copper alloy fragments unidentified.

THE IRON WORK

All iron work was badly corroded and much purely fragmentary. It was just possible to make a general classification of some of the nails, on the basis of the shape of the stem (Manning 1985, 134-6).

As type 1: 95 with square section stem, (common type).

As type 2: 18 with rectangular section stem.

As types 7-9: ? upholstery nails, 11 with large head.

As type 10: sandal studs, (13 mm or 1/2").

Evidence of woodworking, presumed to be Roman, came from a

sample of clinched (bent) nails, used to secure two materials of maximum thickness, 26 mm (1"), 52 mm (2"), 78 mm (3").

One buckle and a terret were thought to be nineteenth century in date.

Other miscellaneous pieces of iron were unidentifiable.

THE OTHER METAL WORK

(These items were reported as having been located and kept by metal-detector users).

MEDIEVAL

Half a silver penny, (John, 1199-1216).

Late medieval bronze ring.

POST-MEDIEVAL

Brass button, C18.

Lead boss, C17.

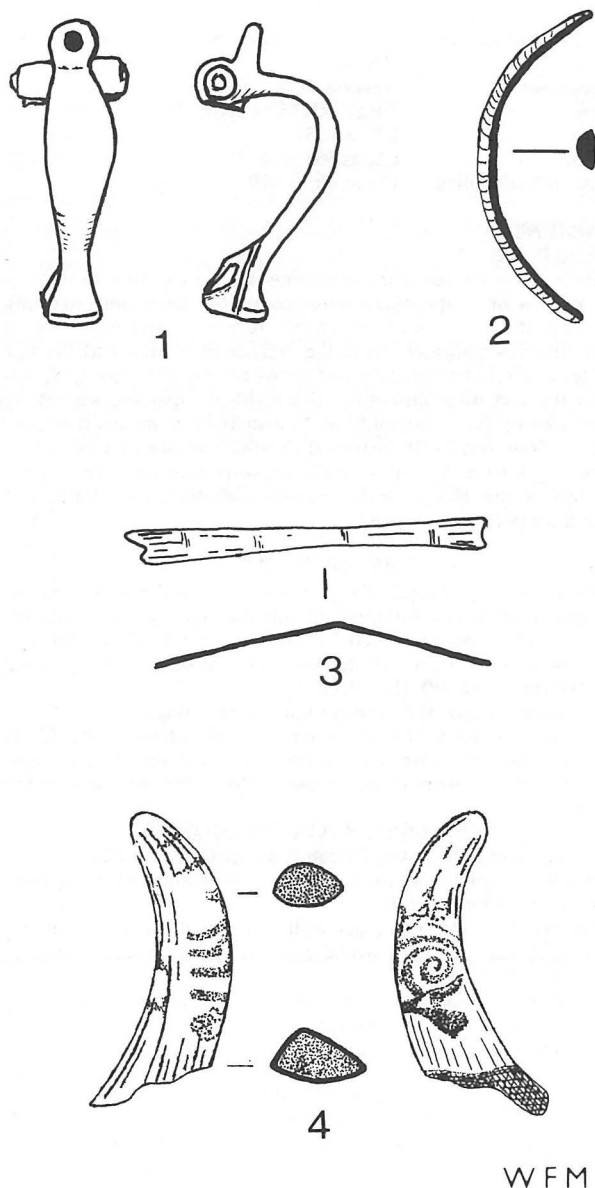


Figure 9. The Copper Alloy Objects, The Brooch, No. 1; The Nail Cleaner, No. 2; The Bracelet, No. 3; The Painted Tooth, No. 4; all at life size.

THE WORKED BONE

Pig's Tooth (Fig. 9, No. 4)

A lower canine pig's tooth with spiral markings, at first thought to be Iron Age in date, has been identified as ethnographic in origin, from the similarity of the rounded cross-section to those of East Asian pigs (Justine Bayley, & Sebastian Payne, pers. comm.).

The markings, of some residual, dark, gum-like substance, make its provenance likely from the Andaman Islands in the Bay of Bengal. (M. McLeod, pers. comm.), and this ethnographic origin was endorsed, with Borneo as the possible source (Dr. Schuyler Jones, pers. comm.).

THE ANIMAL BONE

A quantity of mostly unstratified animal bone was collected, which could, however, have been deposited at any time. Bones of horse, cattle, sheep and pig, etc., were noted with numerous teeth, cow horns and the skull of a horse. There was evidence of butchering from cuts and grooves on the larger bone fragments, but it is impossible to be more specific.

THE WORKED STONE

Quernstones

1 Top stone: ? Lower Greensand, about one-third remaining, estimated diameter 500 mm, depth 100 mm, with signs of use on one side.

2 Lower stone: ? Upper Old Red Sandstone, possibly from the Mendips. Diameter c. 320 mm, depth 50 mm, central hole 40 mm deep. Upper surface convex and dressed, underside very rough and uneven, perhaps a result of splitting.

3 Small fragment of Lower Greensand, depth 110 mm.

4 Not a quernstone: A circular stone with rough, uneven edge, perhaps partly shaped, diameter 400 mm, depth 80 mm, central depression with hole 20 mm deep. It is thought to be from the Bencliff Grit of south Dorset, which is not present in the Corallian Beds of north Dorset and nothing similar has been recorded from the Gillingham area (Paul Ensom and Dr. J. K. Wright, personal communication). (All from Site 3.)

Roof tiles

Two almost whole and one half of a roof tile, Lower Lias, and two upper fragments with holes, ? Old Red Sandstone and Forest Marble.

Hones

Two pieces of Old Red Sandstone with one very smooth and concave side, possibly used as rubbers.

? Hone, 110 mm × 50 mm, oval, of Devon lava, (Exeter Traps Formation).

Stone

Four small Cretaceous fossil sponges, *Porosphaera globularis*, small marble size.

Two flat counters, one of stone, one of clay.

Six small pellets of Egyptian Blue synthetic pigment, used in Roman wall paintings. The raw material was formed into pellets and then ground up for use and applied to the walls in some form of medium. It is not uncommon on sites such as villas where there might have been plastered walls, although no plaster was recovered from this site (Justine Bayley, personal communication).

CERAMIC TILE

An angle piece of flue-tile 850 mm × 600 mm with much inclusion of grog. Surface combing with 8 and 6 teeth intersecting. (Site 6)

Fragments of tile, assumed to be Roman, some apparently from *imbrices*.

Semi-circular clay drain-pipes, 'cup-and-saucer' type, C19 (4).

THE KIMMERIDGE SHALE

P. W. Cox

In addition to a small quantity of raw shale, weighing 0.479 kg, two identifiable fragments were recovered. Neither is illustrated.

1 Fragment of plain, lathe-turned armlet with ovoid section. Internal diameter c. 70 mm. (Site 5)

2 Fragment of vessel, footring and base. Lathe-turned. (Site 5)

THE HUMAN REMAINS

Vince Jenkins, (Trust for Wessex Archaeology)

The bones were those of an adult human cranium in very fragmentary condition. The mandible was completely missing. (Fig. 5)

No attempt was made to reconstruct the skull or to estimate its dimensions.

Well-defined muscle attachments in the occipital region strongly suggest the male sex, but the condition of the other cranial indicators of sex was not good enough to support or refute this.

The surviving teeth comprised all six upper molars, all four upper pre-molars and an upper canine still within their sockets, and a loose upper incisor. The degree of dental attrition indicated an age between 25 and 35 years, but in addition to the normal pattern of wear, these teeth had suffered a great deal of cracking of the enamel. This damage may conceivably have occurred *post-mortem* but most of it appears to be *pre-mortem*. There are no caries in the surviving teeth. There is only the slightest trace of calculus, and there is no recession of the alveolus, such as is caused by chronic periodontal disease. The implication of the state of the teeth is that there was a very hard, perhaps gritty element, in this individual's diet.

There was no evident pathology, and so far as could be ascertained, there was no sign of trauma either. The cause of death was not indicated.

With the skull there was one potsherd of what appeared to be a Roman grey ware.

THE MARINE SHELLS

Several oyster shells, weight 1.490 kg, assumed to be Roman. Largest shell *c.* 110 mm × 120 mm, smallest shell *c.* 70 mm × 70 mm, with 'frilly' layers externally and mother-of-pearl internally.

DATING

Dating of the site comes from the various artefacts, which are entirely unstratified. However, the single, tiny sherd, thought to be Glastonbury Ware and dated to *c.* 400 B.C., continuing in use to C1 B.C., is an isolated find and probably does not represent occupation at that time. There are recorded similar sherds from Maiden Castle and Marnhull (Peacock 1969, 60).

Otherwise, the Durotrigian wares in the traditional forms of the Iron Age sites of Gussage All Saints, Wiltshire and Hengistbury, Dorset, described above, although not closely dated, do suggest pre-Conquest settlement at some time during the period 50 B.C. to 50 A.D. As the earliest samian pottery can be dated to 75 A.D., there would seem to be an interruption in the sequence of occupation. Thereafter, the range of typical black-burnished wares from the Poole Harbour industry gives continuity into the fourth century A.D. Among this pottery, rims from jars predominate from C1 A.D. to C2 A.D., whereas sherds of straight-sided bowls and dishes form the bulk of material from the late C2 A.D. to C4 A.D. One sherd, already noted, is of Exeter Fabric 40, from a C1-C2 A.D. source other than Poole Harbour, as yet unidentified, and this type has already been seen among material from the Allard's Quarry, Marnhull collection in the Dorset County Museum and elsewhere in Dorset (Susan Davies, pers. comm.).

The fragments of imported and native fine wares are of particular interest and importance. They include the single rim of micaceous *terra nigra* and its association with pre-Conquest groups; a mortarium sherd of C1 or early C2 A.D., made by continental potters in Britain; the fragments of barbotine (A.D. 70-140), lead-glazed (late C1 – early C2 A.D.) and Rhenish (A.D. 150-200) pottery; the range of samian from 75 A.D. up to the early C3 A.D.; all of which point to an early start to the Roman occupation. This is further endorsed by the C1 A.D. fibula and also the base of an unidentified grey ware beaker, (Fig. 8, no. 6), paralleled in a context of *c.* 80-85 A.D. in Dorchester, Dorset (Jo Draper, pers. comm.).

Even though unprovenanced, the range of coins from the mid-C2 A.D. with sherds of type 20 Dressel amphorae from Spain and a rim dated to the second half of C2 A.D., dovetail neatly with the other pottery described, to confirm continuing occupation of the settlement. It was, moreover, at this period that most of the samian was in use.

Fine and coarse wares of the C3 and C4 A.D. from the New Forest and Oxfordshire kilns, form a body of evidence

for that period, although problems of identification make the precise origin uncertain. However, Gillingham is within the main distribution area of both the potteries (Fulford 1975a, Fig 61), and parallels from the New Forest types listed can be found, particularly from Colliton Park, Dorchester and Allard's Quarry, Marnhull. The coarse grey wares are found at Bokerley Dyke, Dorset and further afield. Some of the Oxfordshire Roman sherds already have Dorset parallels. The large storage jars, although unprovenanced, are found on Roman sites during the late C3 and C4 A.D. (Fulford 1975b; Green, forthcoming).

The absence of coins from the last quarter of the C4 A.D. at Gillingham has been noted, with a similar lack described from other rural sites in Purbeck, south Dorset, even though in each case pottery confirms that the settlements were in use up to the end of that century. Such an omission points to a system of barter being in operation, thereby reflecting a deteriorating economy (Woodward 1980, 102-3).

The material described has established a date range from *c.* 75 A.D. to the C4 A.D., with an earlier phase during C1 B.C./A.D., which cannot be specifically dated within the period.

DISCUSSION

THE SETTLEMENT

With the rapid development of the site, involving destruction of sealed archaeological deposits and the acquisition of artefacts by metal-detector users and other collectors over the years, the record of finds is obviously incomplete, but nevertheless, a remarkable range of artefacts has been identified, spanning some five centuries.

The settlement apparently did not extend any further north than the original area described, and although pottery was seen to the south and east of Common Mead Lane, these areas were not examined. No roads have been identified. The name Cold Harbour is often found near an important old road, and in spite of being frequently associated with Roman sites, is first recorded in Dorset only in the eighteenth century (Mills 1988, 58). The area named Cold Harbour in Gillingham might suggest a nearby Roman road and there are also two fields of that name to the north-west and north-east, the latter being on the line of the old route from Mere to Shaftesbury as shown on a map of the Royal Forest of Gillingham in 1624 (R.C.H.M. IV, 1972, Plate 56), and both fields are on or near the county boundaries of Somerset and Wiltshire respectively, perhaps confirming the antiquity of these boundaries. There is no apparent link with the known Roman road 9 km to the north-east, possibly obliterated by the medieval Royal Forest.

THE DUROTRIGIAN PHASE

With the lack of close dating for the Durotrigian phase, interpretation is difficult on the slender evidence of a few pottery sherds. Conquest and subjugation of the Durotrigian territory by Vespasian had taken place by A.D. 47, destroying more than twenty hillforts in the process, including Hod Hill (16 km south of Gillingham) and possibly also the unexcavated Whitesheet Hill, Wiltshire (8.5 km to the north), where local people might have retreated. A Durotrigian settlement at Gillingham, if it existed at the time of the conquest, would surely have been overrun and abandoned in the wake of this Roman advance.

THE ROMAN OCCUPATION

As reoccupation is implied by A.D. 75, rapid Romanisation evidently took place, in which Gillingham clearly became an undefended settlement with civilian status, for the lead-glazed wares of the first to second centuries A.D. were especially orientated to civilian outlets (Arthur 1978, 312) and with the other fine wares, suggest some degree of sophistication and, of necessity, a trading capacity, its increasing size indicated by the greater samian loss after about A.D. 150.

The querns, iron slag, lead and copper alloy are what might be expected, while the other finds such as shale and the Egyptian Blue synthetic pigment could indicate some form of contracting or distribution, for no wall plaster has been identified to justify the latter, nor for that matter were any tesserae recovered and only one piece of flue-tile. It is surprising that no evidence of kilns or wasters has been found to denote a pottery industry, as Gillingham clay has been exploited for the manufacture of bricks and tiles since the eighteenth century. However, the good quality agricultural land and some woodland would have supported a pastoral economy, which might also have been the basis of the Durotrigian economy.

The position of the site near the confluence of the rivers described above suggests their possible use as a means of transport, but it does seem unlikely that the upper reaches of the River Stour would have been navigable at that period. Gillingham is only one of several Roman sites in the area which noticeably follow the line of the River Stour. Its proximity to those at West Stour (5 km), Allard's Quarry, Marnhull (6 km), Nyland, Kington Magna (7 km), Wincanton (8 km) and Hinton St. Mary (10 km), must make it part of the pattern of dispersed settlement described in south Somerset and north Dorset (Leech 1977, 180), although its particular function within this group cannot be determined. The major town of Ilchester lay some 30 km away.

THE CEMETERIES

A number of inhumation burials was reported near Langham, about 2 km west of Gillingham when quarrying the oolitic limestone at c. 106 m O.D. The actual site is somewhat uncertain and the date unknown. There were at least one hundred extended skeletons, arranged at 2 ft (0.61 m) intervals, about 3 ft (0.91 m) below the surface, orientated east-west. Finds recorded were two brooches and some sherds of rough pottery (R.C.H.M. IV 1972, 101-2). More recently, fieldwalking by the author in the area produced only two sherds of black-burnished ware.

It was also recorded, prior to the second edition of John Hutchin's County History of 1815, that similar burials had been found when opening quarries, four of which are named, in the parishes of Marnhull and Todber, some 6 km from Gillingham. These inhumations were said to be 5 ft-6 ft (1.52 m-1.83 m) below the surface and were numerous, orientated east-west, in close ranks with the heads of the second rank placed between the legs of the first '... a clear proof of their having been regularly placed ... and not thrown in promiscuously ...' (Hutchins 1868, (3rd ed.), III, 326-7). In 1870-1, some twenty-seven skeletons were exhumed from Great Down Quarry in the same area and were similarly described, with in some cases, the heads being protected by slabs of thin paving stone placed triangularly over them. There were associated finds of Roman pottery, fibulae and coins from Carausius to Constans (*ibid.*). Unfortunately there is no other information from parish records or elsewhere. Excavations at Allard's Quarry, Marnhull, one of those originally named as Gannets, produced four Iron Age and seven Romano-British burials with possible evidence of more. This site was occupied from the fourth century B.C. to the first century A.D. and again from the late third century A.D. to the late fourth century A.D. (Williams 1951, 26, 32, 70-1).

These descriptions provide a comparative background for the single burial at Gillingham, already detailed, although the skeleton was orientated north-south. As it was found during a pipe-laying operation, no further area was explored to confirm the possibility of other graves, but with considerable Romano-British pottery in the fill, it was thought at the time to be within the bounds of the settlement. The hob-nails, beside the grave rather than in it, are an interesting feature whose presence might be symbolic.

Presumably the coffin nails were evidence of the type of

burial but no trace of wood or other metal fittings were recovered. The only object that could be classed as grave goods, was a single iron knife or spike, 80 mm long, which unfortunately disintegrated during conservation.

Analysis of these burials from Langham and the parishes of Marnhull and Todber, with their regularity, the absence of grave goods, the stone over the skull, the west-east orientation and the respect for existing graves, shows them to be of the standard rite observed for rural cemeteries (Christopher Sparey Green, pers. comm.), occurring where there is a long interval between the end of the Roman period and the introduction of Saxon settlement (Rahtz 1968, 193). A group of such cemeteries following these criteria, with many variations, has been designated as Type A Sub-Roman secular, and seems particularly appropriate in Somerset, where Saxon colonisation was late (Rahtz 1977, 55), as in Dorset.

They are not obviously Christian or pagan, and yet appear to have adopted Christian practices with the west-east orientation of the graves, in spite of some exceptions. There is evidence from some sites with cemeteries of an earlier Roman or prehistoric phase as suggested at Cannington, Somerset (*ibid.* 59) as well as late Iron Age occupation both at Allard's Quarry, Marnhull and the late C4 cemetery of Bradley Hill, Somerton, Somerset (Leech 1981, 177). If the Langham cemetery can be allied to the Gillingham settlement, the same pre-conquest conditions existed there too.

A close association with Roman settlement is one of the prerequisites for this type of cemetery, with dating from coins or pottery into the fourth or fifth centuries, continuing even longer. If this relationship is not established, then a Roman site or Roman artefacts in the graves may be an aberration or just coincidence (Rahtz 1977, 55). Perhaps Langham falls into this category and the single inhumation from Gillingham. Certainly at Ulwell, near Swanage, there is no related Roman site and only one coin recorded in the grave fill (Cox 1988, 45).

Comment has been made on hob-nails; they are not unusual and are not considered grave goods. However, coffin nails as at Gillingham or wood or stone coffins or slabs, noted from Great Down Quarry, Marnhull and Ulwell, Swanage, are thought to be from an earlier phase (Rahtz 1977, 55).

Saxon pagan burials are characterised by their rich grave goods, so it is in contrast to find these sub-Roman cemeteries so markedly without artefacts, their absence thought to be a Christian rite. Those Roman finds recorded from Great Down Quarry, Marnhull including coins, pottery and part of a quern would suggest that the cemetery was related to a settlement but the material obviously cannot be classed as grave goods. The brooches and pottery from Langham could be of any period or association as they are not defined at all. Those from Cannington, Somerset were more numerous including several knives, with the small sample used for radiocarbon dating taking the cemetery to the seventh or eighth century. The iron knife found in a grave at Ulwell provides a parallel for what seemed to be a similar object at Gillingham, so the seventh century date of the former might, by inference, be applied there.

Given the evidence of Christianity in Dorset from the villas of Hinton St. Mary and Frampton of the mid-fourth century and Poundbury, part of which is the only definitive Christian cemetery, it is impossible to assess their religious aspect in relation to the Gillingham settlement and the associated cemeteries. The significance of the rites has been emphasised, but without specific evidence and radiocarbon dating, no conclusion can be reached. However, the Bradley Hill, Somerset cemetery is thought to demonstrate the adoption of Christianity in the late fourth century, in contrast to the traditional Roman burial there with a coin in the mouth of the early fourth century, suggesting thereby,

that Somerset was becoming Christian at that time (Leech 1981, 203-5). There is, conversely, no evidence for the destruction of the temple at Maiden Castle or pagan shrines elsewhere and it is not realistic to say that Roman Britain had largely ceased to be pagan by the early fifth century (Salway 1985, 734), but the position in rural areas is unknown.

THE ANGLO-SAXON PERIOD

The place-name of Gillingham gives more positive evidence. First recorded in the Anglo-Saxon Chronicle in the eleventh century, it is derived from the Old English words *-inga*, 'followers or people' and *hām*, 'a homestead or village', with Gylla as a masculine personal name; thus, 'the village of Gylla's people' (Mills 1986, 77). The element *hām* is considered to be the most primitive in terms of dating, and is said to have a marked relationship to Roman roads (Myers 1986, 40), whereas the *-inga* prefix is related to some later phase of Anglo-Saxon territorial expansion and colonisation in a pre-Christian community. Some relationship with Anglo-Saxon burial sites has been established (Dodgson 1966, 17, 19). It must be pointed out that the analysis of these place-names has been carried out almost exclusively in south-east England and the application elsewhere is not proven.

From the intervening centuries of plague and violence, without coinage and virtually aceramic in a subsistence economy, it is not surprising that so little trace remains in the archaeological record. But from Gillingham the ninth century Anglo-Saxon sculptures are witness to the importance of ecclesiastical and royal connection in the establishment of a church in a *villa regalis*, which possibly extended back into earlier centuries (Keen 1984, 203, 208, 229). At Marnhull and elsewhere in the area, Anglo-Saxon charters exist from this period.

It can only be speculative to say that the burials described from Langham, Marnhull and Todber, now totally lacking in archaeological detail, possibly run from the late or post-Roman period to the time of the Anglo-Saxon occupation, which in Dorset was delayed until the late sixth or seventh centuries, but the evidence seems to incline to that view. As Gillingham became Christian, it is assumed that the old cemeteries were abandoned with the foundation of the church and the requirement of burial in its graveyard.

The settlement remains, therefore, something of an enigma; undefended, yet with no evidence of a villa, but having agricultural and trading potential. The artefacts from its long life span demonstrate first century B.C./A.D. occupation and thereafter, apparent continuity from c. 75 A.D. to the fourth century A.D., with Gillingham emerging in the ninth century or earlier as an ecclesiastical estate on a different site, centred some 750 m away. It is a tragedy for the north of Dorset that the Common Mead Lane Romano-British settlement has disappeared without full evaluation of its archaeology.

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Abbreviations

Dorset Proceedings – Proceedings of the Dorset Natural History and Archaeological Society.

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Excavation near a 17th century Kiln at Horton, Dorset

PENNY COPLAND-GRIFFITHS

INTRODUCTION

In 1976 an organised search for kiln sites within the pottery producing area surrounding Verwood, East Dorset led to the discovery of a heavy scatter of waster sherds in the adjacent village of Horton, north of the Ringwood road on the eastern edge of the village (Fig. 1: SU 03150753). A small excavation took place in April under the direction of David Algar of The Salisbury Museum Research Group with the aim of obtaining a larger sample of the ware.

THE EXCAVATION

A 3 m by 3 m square set at random over the sherd scatter was excavated down to subsoil at approximately 0.6 m. Apart from a post-hole in the south-east corner of the trench, no stratification was discernable. At all levels however, there were large quantities of sherds, and immediately above sub-soil lay a deposit of waster vessels many of which were complete or capable of substantial restoration. Throughout the waster deposit fragments of kiln debris, mostly bricks, were found.

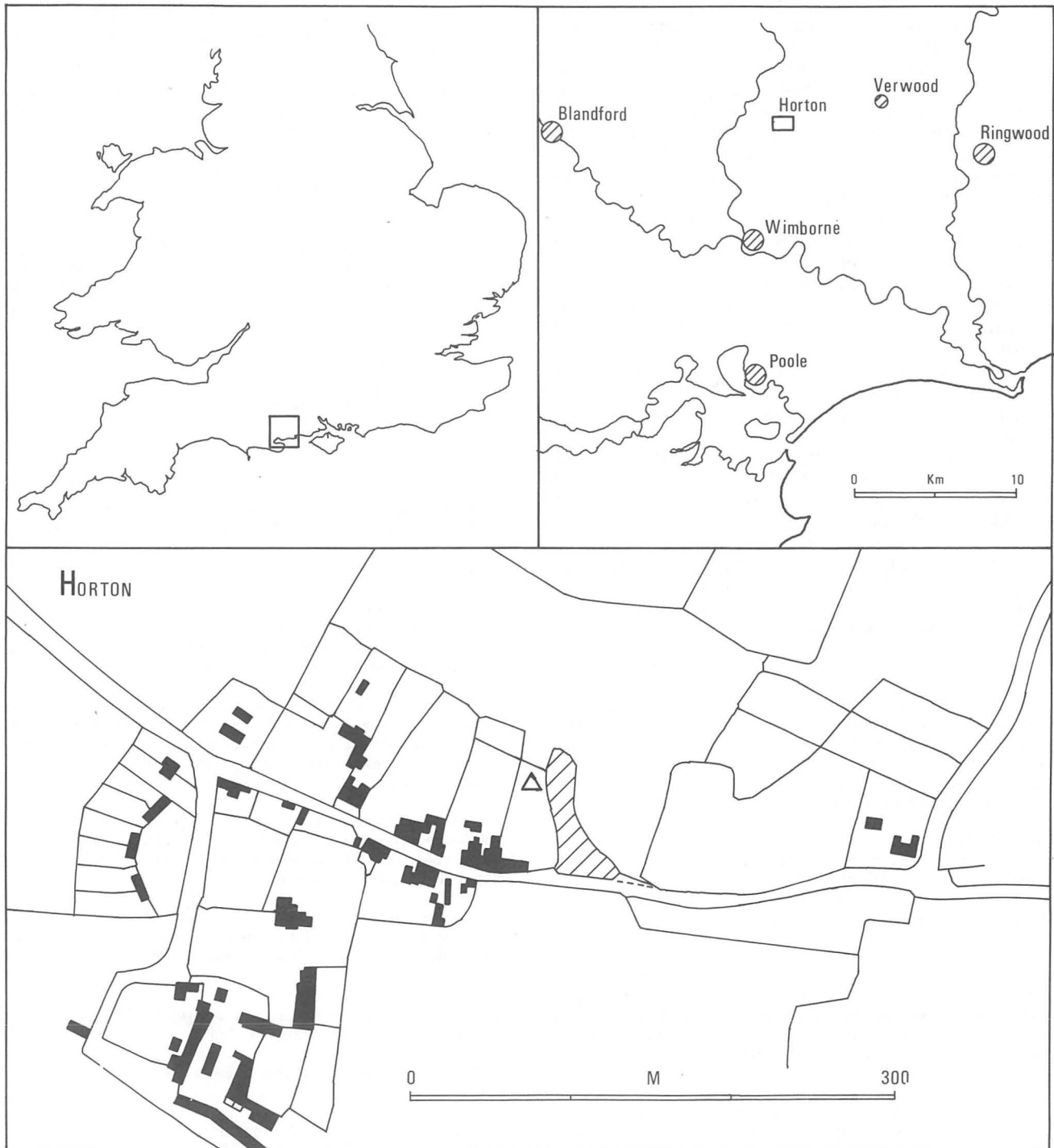


Figure 1. Horton: Location map. The triangle on the lowest map indicates the excavation.

DOCUMENTARY EVIDENCE & CLAY SOURCES

The documentary references to potting within Horton village are confined as yet to the 17th and early 18th centuries. (Algar *et al.* 1987, 27). It is clear from the Court Books that the major clay source was on Haythorn Common a little to the north but there is evidence of only two potters exploiting it. William Frost was working by 1616 when he was presented to the Court for digging clay in the Lord's waste (Manor of Horton Court Book – Earl of Shaftesbury, temporary catalogue number M/3250 in 1978). Further presentments for similar offences occur in later years and the business appears to have ceased following his death in 1659. His will (D.R.O.AD/DT/W/1660/14) provided little information about his trade apart from naming him as a potter, and no inventory survives. Whether William, the son he mentions in his Will, took over his father's kiln is not confirmed, but he was certainly potting, for in 1684 there is an entry in the Court Book referring to clay digging by him at Haythorn. (Manor of Horton Court Book – Earl of Shaftesbury temporary catalogue number M/3532 in 1978).

Elias Talbot was working from at least 1652 when, on the first of many occasions, he was amerced for digging clay in Haythorn 'having no right to dig there' (*Ibid.* – Folio 157). From Chalbury (Chalbury Account Books – Earl of Shaftesbury E/S/7) we learn that on the 14th April he was granted copyhold on a cottage and a plot of land on Chalbury Common, just beyond the Horton boundary.

In his Will of 1672 (P.R.O.B.11/344 D.R.O. Photocopy 503), he is stated to be of Horton, but property in both Horton and Chalbury is mentioned. His copyhold passed to his wife, but the kiln was taken over jointly by his wife and Richard Lacy, his brother-in-law. Within a few years Thomas Lacy, presumably Richard's son, was running it and continued to do so until his death in 1711, when the business appears to have ceased. As it would appear that he lived in Chalbury it is unlikely that Talbot worked this excavated site.

Richard Harding's map of 1620 (National Trust Kingston Lacy archive) confirms that the Frosts occupied a site near the excavated one, and it is possible that they were indeed the potters at the excavated site. Direct documentary evidence is lacking. The tenancies within Horton were the subject of much sub-letting during this period and it is frequently impossible to identify the actual occupier. As more private documents become available for study this information may come to light.

THE POTTERY

The sample of pottery excavated contained sherds of an estimated nine hundred and sixty one vessels, being part of a large associated group deposited apparently near the kiln. Divided into nineteen types, a total vessel count is given at the end of each type. At the end of the description handles, body sherds and bases not divided into types are simply weighed.

HTNV1 – Saucers

1.1 No. 1. Extremely overfired internally, with thousands of burst bubbles giving a pitted surface. The rim shows surviving traces of green glaze (C9) which has run externally almost reaching the base. 3 mm parting scar on rim. Base is knife trimmed. Not illustrated, two C11 and two extremely overfired as illustration.

1.1 No. 2. Extremely overfired internally. The wheel dark green with burst bubbles like No. 1, the background orangey yellow glaze with brown flecks from barely visible to 5 mm. The reverse has incised lines which echo the wheel. The missing segment is defined by two of the incised lines. Not illustrated, another example with similar wheel design.

1.2 No. 3. Internal wet-looking olive green a darker variant of C1 with more iron flecking varying from barely visible to 3 mm. Base is knife trimmed. Not illustrated, three C11, one C6 and two C4.

Three further sherds too small to classify and all overfired.

Number of vessels = 17. Note totals include illustrated vessels.

HTNV2 – Mugs

2.1 No. 4. A wet-looking external glaze in a green darker than C11 with streaks of yellow, yet not the dark bottle green of C9. Internally yellowish with flecks of brown which run towards the base and vary from barely visible to 5 mm.

2.1 No. 5. Extremely overfired almost complete vessel with traces of a green glaze C9 surviving on the rim. Otherwise the glaze is blistered and pitted externally and internally. A thumb impression flattens the base of the handle. Base unglazed except where the glaze runs over the edge. Not illustrated, another C9.

2.1 No. 6. Olive green C6 overall but towards the base turning to an orangey-yellow C3 colour. Internally similar except the flecking seems more dominant varying from barely visible to 5 mm.

2.1 No. 7. External green glaze C9 internally a yellowish orangey colour with spots of iron from barely visible to 4 mm and intermittent to condensed.

2.1 No. 8. A dark olive glaze C7 externally. A yellowish orangey colour internally with spots of iron from barely visible to 2 mm. Not illustrated, two C8 variants.

2.1 No. 9. External green glaze C9 variant, which has run over the break. Internally yellowish with iron spots from barely visible to 1 mm.

2.2 No. 10. External dark olive green glaze C8 with brown flecking. Shreds of clay from the rim to just below the cordon range in size from 3 mm to 15 mm. Internally yellowish green with iron spots from barely visible to 5 mm. Not illustrated, one C8, one C11 and one C12.

A further nineteen fragments too difficult to classify. Three bases one C8, one overfired and one C10. Eight handles one burnt, two underfired, four C8 and one unclassified. Eight body sherds eight C11.

Number of vessels = 32.

HTNV3 – Bowls

3.1 No. 11. Internal wet-looking green glaze C10 which has run over the rim onto the exterior surface for 5 mm. Not illustrated, one C11 and one C8.

3.1 No. 12. Internal wet-looking olive green glaze C1 with small orangey patches and smears. Glaze is distinctly different internally in texture, much paler, dry looking, and lacks the brown flecking. Not illustrated, one C8, one C12 and one underfired.

3.1 No. 13. An internal olive green glaze C2 with shreds of clay varying in size from 17 mm to 1 mm in length and 10 mm to 1 mm in width and covering three-quarters of the base. There are a further five fragments too difficult to classify. Bases one C12. Body sherds three C12.

3.2 No. 14. Internal orangey-yellow C3 glaze with concentrated iron flecking varying in size from barely visible to 10 mm. The glaze has run over the rim indicating position of pot when fired as the glaze has congealed at this point.

3.2 No. 15. Overall covered in scum although more condensed internally than externally, internally under the scum traces of a yellowish glaze can be seen. Not illustrated, unglazed with a run of greenish glaze internally.

3.2 No. 16. Internal wet-looking orangey-yellow C3 glaze with iron runs varying from barely visible to 10 mm.

3.2 No. 17. Internal pale orangey-yellow C4 glaze with miniscule iron spots.

3.2 No. 18. Internal pale olive green C6 glaze with iron flecks from barely visible to 1 mm. Not illustrated, three C3 variants.

3.3 No. 19. Being underfired internal glaze appears whitish colour.

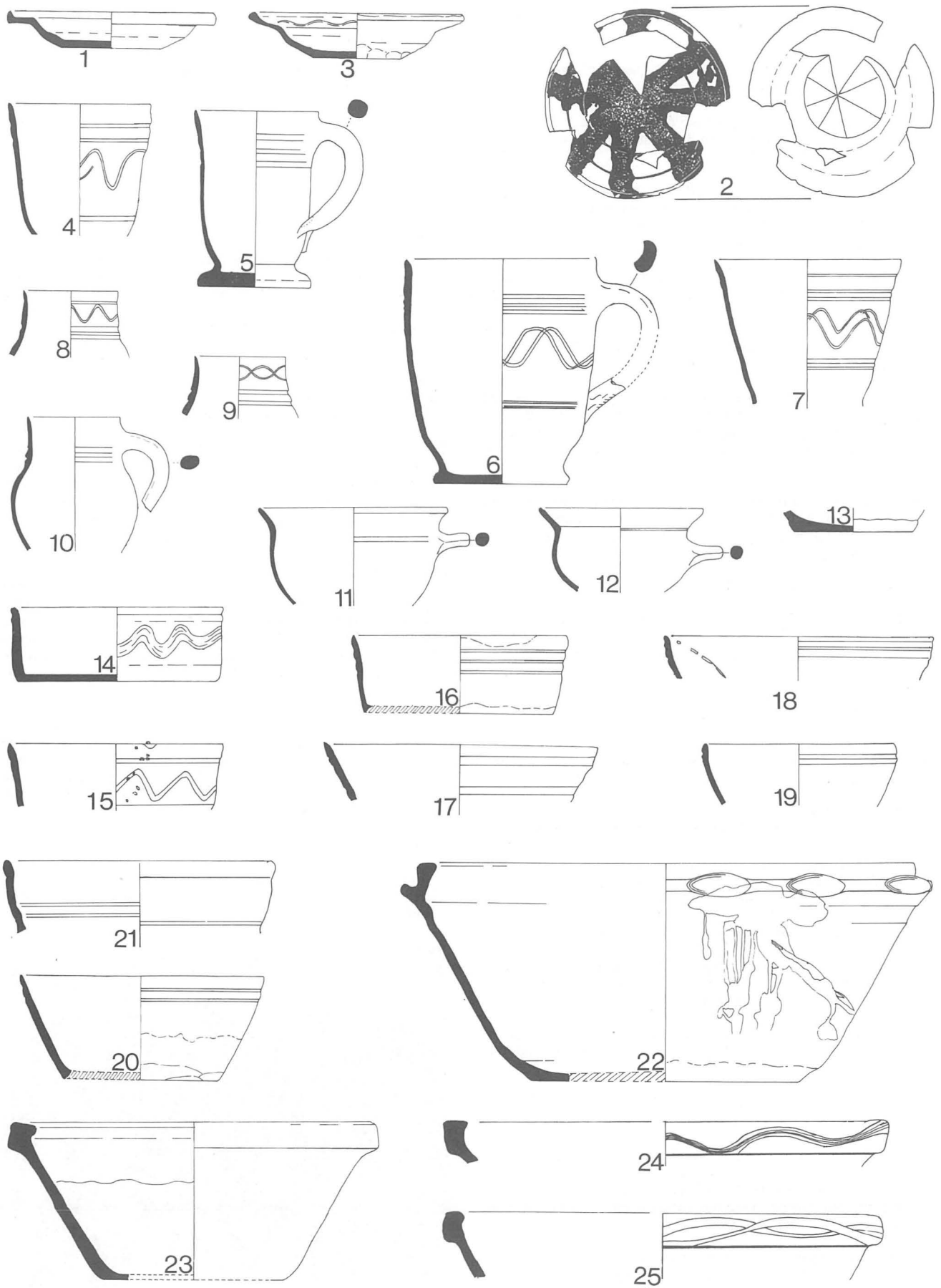


Figure 2. Horton: the pottery. HTNV1 Saucers Nos. 1-3, HTNV2 Mugs 4-10, HTNV3 Bowls Nos. 11-25. At $\frac{1}{4}$ life size.

3.3 No. 20. Internal green C10 glaze with yellowy patches which has run over the rim and down the exterior surface of the pot some 40 mm.

3.3 No. 21. Internal orangey-yellow C3 glaze with iron flecking varying from barely visible to 1 mm.

3.4 No. 22. Internal wet-looking pale olive C5 glaze with flecks of iron varying from barely visible to 7 mm in length. Not illustrated, one underfired and one C5.

3.5 No. 23. Due to being underfired glaze appears dull and therefore difficult to classify. Not illustrated, seven internally glazed, two underfired, two C6, one C2, one C4, one C3, one burnt and one C3 glazed only around inner base.

3.5 No. 24. Internal wet-looking pale olive C5 glaze with iron flecks varying from barely visible to 4 mm in length. Not illustrated, one underfired.

3.5 No. 25. Internal dull olive C5 variant with less flecking which has run on to the rim. Not illustrated, one C4.

3.6 No. 26. Internal wet-looking olive C6 glaze with iron flecking varying in runs from barely visible to 10 mm when joining up. Not illustrated one partially glazed C6, three burnt, eighteen glazed internally one underfired, three C3, six C6, five C4, three C2 and five unglazed.

3.6 No. 27. Internal orangey-yellow C3 glaze dull and covered with scum. Not illustrated, eighteen other examples – one reduced, two partially internally glazed C6, one internally glazed C6, one C3 and two C3 variants, eight unglazed and three burnt.

3.6 No. 28. Extremely overfired.

3.6 No. 29. Totally unglazed. Not illustrated, twelve examples three unglazed, six glazed internally one C13, one C6, two C2 and two C4 three are unable to be classified.

3.7 No. 30. Totally unglazed. Not illustrated, one internally glazed C6 and four unglazed.

3.7 No. 31. Totally unglazed. Not illustrated, seven examples – four glazed internally two C6 and two C13, two unglazed and one not able to be classified.

3.8 No. 32. Unglazed except as illustrated under the rim an orangey-yellow C4 glaze. Not illustrated, one burnt example.

3.8 No. 33. Totally unglazed. Not illustrated, ten examples – five unglazed, three glazed internally two C6 and one C4. One unable to classify and one glazed under the rim only C5.

3.9 No. 34. Due to being underfired glaze appears a cream colour.

3.10 No. 35. Internal wet-looking olive C5 glaze with iron flecks varying in size from barely visible to when joining up 10 mm. This vessel is warped. Not illustrated, one C3.

3.11 No. 36. Internally glazed in olive C6 with iron runs in the lower half. Not illustrated, three glazed internally C3 and one unglazed.

3.11 No. 37. Internal glaze a variant between C3 and C6 with iron flecking varying between barely visible to 2 mm.

3.12 No. 38. Internal orangey-yellow C4 glaze rather underfired.

3.13 No. 39. Internal pale olive C6 glaze with iron flecks running towards the rim. Owing to the proportion of rim present it is probably oval. Not illustrated, one C4 variant.

3.13 No. 40. Internally glazed on the lower half in an orangey-yellow glaze C3. Not illustrated, nine examples – five unglazed, two glazed on lower half one C1 and one C3, two glazed internally both C3.

3.13 No. 41. Internal orangey-yellow C4 variant with heavy spots ranging from barely visible to 7 mm overall.

3.13 No. 42. Internal wet-looking orangey-yellow C3 glaze with iron flecks from barely visible to 5 mm.

3.14 No. 43. Internal wet-looking pale olive C5 glaze variant being more orangey in colour with iron flecks running towards the rim from barely visible to 10 mm.

3.15 No. 44. Internal pale olive green C1 glaze. Difficult to reconstruct. Possibly rather shallow. Not illustrated, one C3.

3.16 No. 45. Internally underfired pale olive C2 glaze.

Number of vessels = 154.

HTNV4 – Dishes

4.1 No. 46. Internal wet-looking olive C6 glaze with iron flecking runs which join up producing even longer runs. Not illustrated, sixty-two examples – seven underfired, twenty glazed internally, thirteen C3, two C6, one C2, two C1, one C5, one C6 and four C3 possibilities but due to dull glaze classification difficult. Unclassified, one C4.

4.1 No. 47. Internal olive C5 glaze with small iron flecks. Not illustrated, eighty-nine examples – fifteen underfired, thirty-six C3, six C13, six C1, 11 C6, six C4 and nine unclassified owing to dull glaze.

There are thirty-five sherds too small to be classified, but divided into glaze classification: Rims – five underfired, one unclassified, three burnt, four C4, sixteen C3 and three C1. Body sherds – one C13, one C6 and one C3.

Number of vessels = 164.

HTNV5 – Pancheons

5.1 No. 48. Internal orangey-yellow C3 variant. Direction of iron runs ending in a globule indicate vessel was fired on its side. Diameters ranging from 340 mm to 480 mm. The most prolific size being the 400 mm. Not illustrated, one hundred and four examples – five C1 and five variants, thirty one C3 and one variant, two C4, six C5 a one variant, forty C6, six C13 and two variants, one unglazed, three burnt and one underfired.

Unmeasurable – Three unglazed, forty-nine extremely burnt, eleven reduced, one hundred and thirty-five glazed inside – seven C1 and two variants, two C2, twenty-five C3 and one variant, twenty-five C5 and ten variants, thirty-four C6 and eleven variants, seven C13 and two variants, three too dull to classify and six also too difficult, seventeen underfired.

Number of vessels = 318.

5.2 No. 49. Internal wet-looking C3/4 variant due to underfiring, white powdery lead covers a large portion of the surface. Not illustrated, four examples – one C3, one C6, one C5, one C13.

Number of vessels = 5.

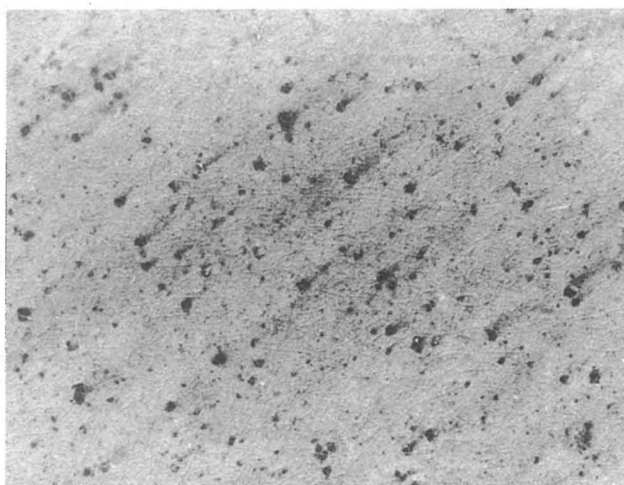


Plate 1. Close-up photograph showing the run of the glaze and consequent iron flecking, which is particular to material from this kiln. At twice life size.

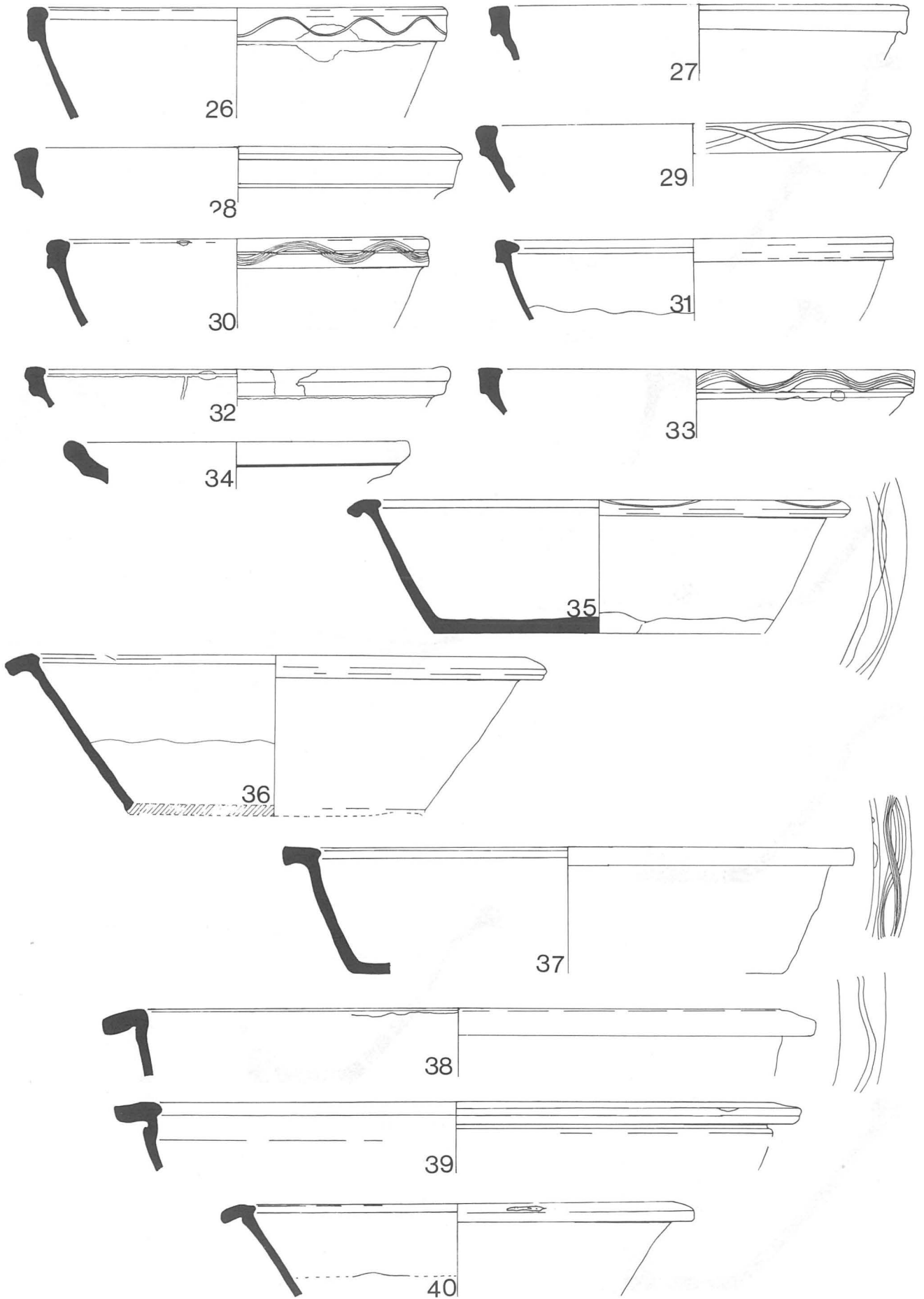


Figure 3. Horton: the pottery. HTNV3 Bowls Nos. 26-40. At $\frac{1}{4}$ life size.

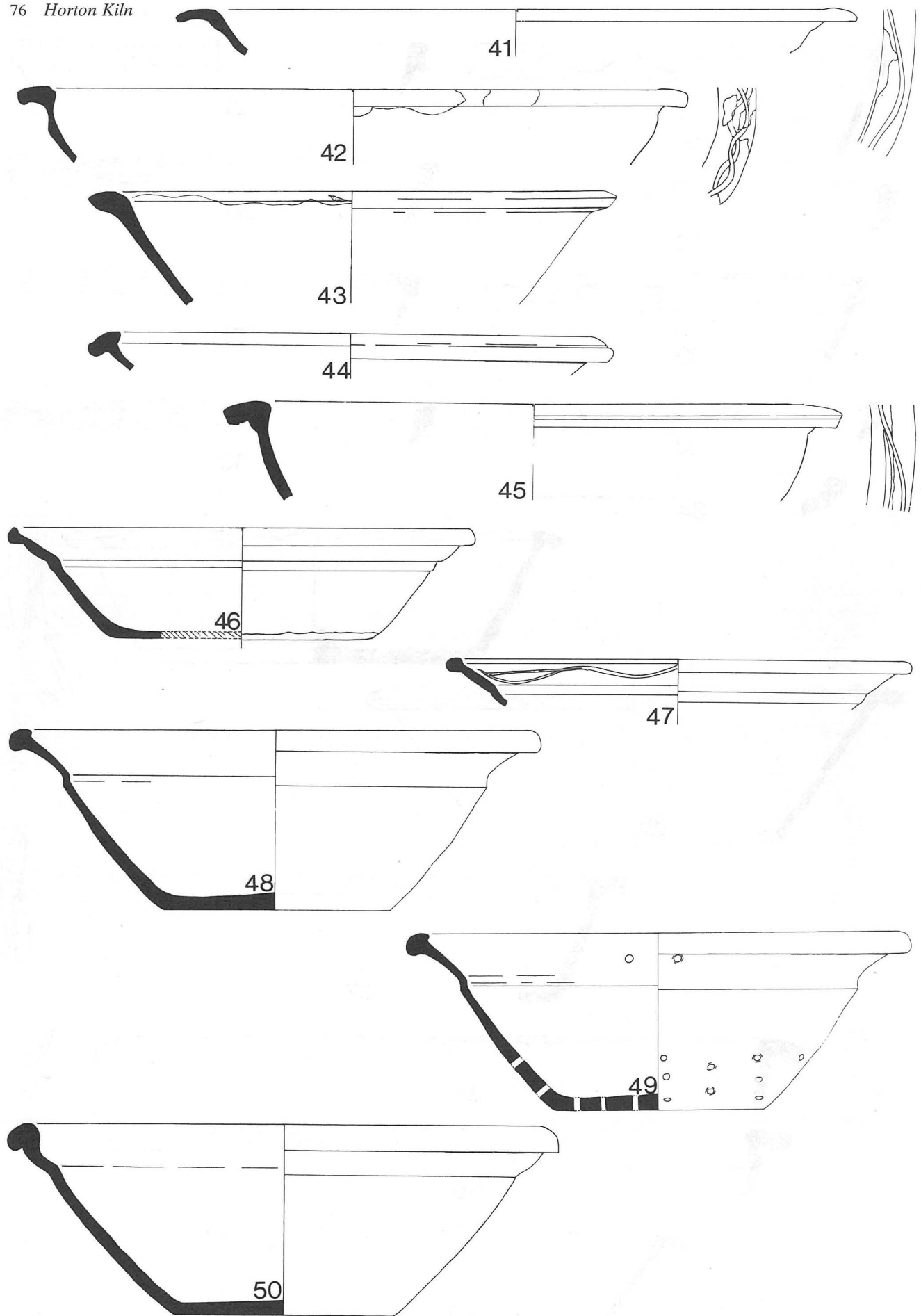


Figure 4. Horton: the pottery. HTNV3 Bowls Nos. 41-45. HTNV4 Dishes Nos. 46 & 47, HTNV5 Pancheons Nos. 48-50. At $\frac{1}{4}$ life size.

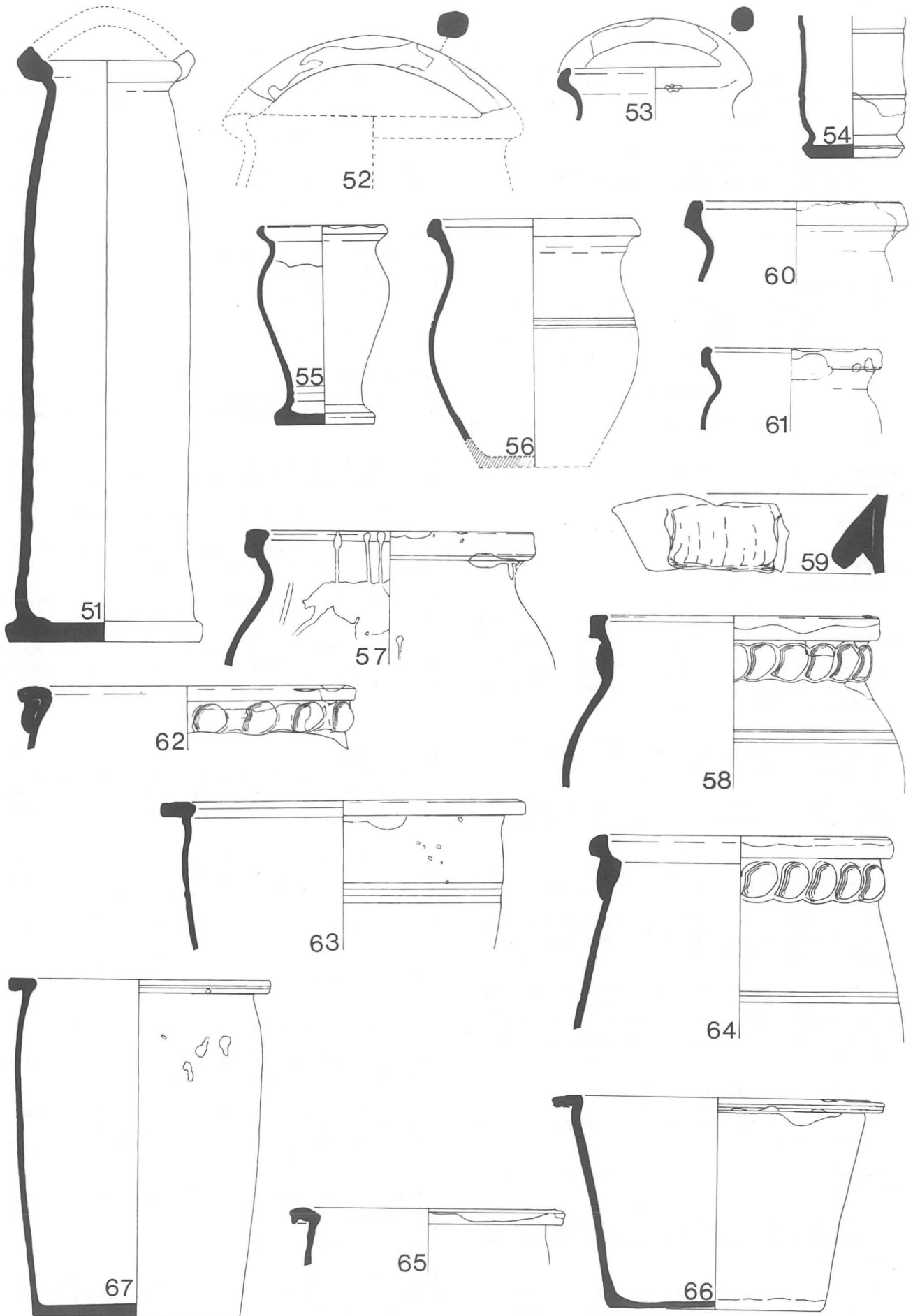


Figure 5. Horton: the pottery. HTNV6 Butter pot Nos. 51-53. HTNV7 Storage jar Nos. 54-65. HTNV8 Commode Nos. 66 & 67. At $\frac{1}{4}$ life size.

5.3 No. 50. Internal lower half of the vessel glazed in an olive green C6. Diameters ranging from 340 mm to 480 mm, the most prolific size being the 440 mm. Not illustrated, fifty-four examples, five C1, one C2 and one variant, twelve C3 and two variants, six C5 and one variant, seventeen C6 and two variants, three burnt, one unglazed, two reduced, one unclassified.

Unmeasurable – Five unglazed, ten extremely fired, eleven reduced forty-six glazed inside, four C1, four C2, four C3, nineteen C5, nine C6 and six variants, two C13 and one variant, two unclassified and five underfired.

Number of vessels = 131.

HTNV6 – Butter pots

6.1 No. 51. External wet-looking olive green C6 glaze with flecks of iron which seem to join up to produce longer runs and indicate that the vessel was fired upsidedown. Base unglazed except where it has run over the edge. There is another scar 5 mm by 7 cm.

6.1 No. 52. Unglazed but with glaze runs.

6.1 No. 53. Overall wet looking olive green C6 glaze with iron flecks.

Not illustrated, seven examples – one C1 variant, two C3 and one variant, three C6.

Number of vessels = 10.

HTNV7 – Storage Jars

7.1 No. 54. Very varied C3/4 variant.

7.2 No. 55. Internal orangey-yellow C4 variant with heavier spots varying from barely visible to 5 mm. This only covers the inner rim and 15 mm inside the vessel. Not illustrated, twenty-six examples – two internally glazed C3, one semi glazed C6, four glazed overall C6, three glazed internally C6, thirteen extremely burnt, two unglazed, one unglazed and reduced.

7.3 No. 56. Due to firing result internal dull C3 glaze, signs of reduction on the external surface. not illustrated, two examples, one dull and overfired and the other unglazed and reduced.

7.4 No. 57. Overfired with C13 glaze runs. Not illustrated, three examples – one C3 on external rim only, one C6 and one C13 internal glaze.

7.5 No. 58. Internal olive C5 glaze showing reduction on external surface. Not illustrated, three examples – one burnt and two C5.

7.6 No. 59. Internal olive C6 variant with heavier iron runs. There is glaze accumulation under the handle. Not illustrated, two examples – one burnt and one C5.

7.7 No. 60. Internal wet-looking olive C6 glaze which seems to fade out after the internal rim. Not illustrated, two examples – one burnt and one C6 with signs of reduction and some 10 mm below the bottom of the rim is a circumferential line that diverges where it should meet.

7.8 No. 61. Internal dark olive green C13 variant.

7.9 No. 62. Unglazed and reduced with traces of glaze internally C13 dark olive green.

7.10 No. 63. Internal wet-looking olive C5 glaze with very dominant iron runs.

7.11 No. 64. Internal wet-looking C3/6 variant. Patches of white lead varying in size from barely visible to just over 5 cm. Not illustrated, one burnt.

7.12 No. 65. Internal pale olive C1 variant with heavier flecking. Not illustrated, one C1. One other vessel not classified, a base C6 diameter 40 cm.

Number of vessels = 48.

HTNV8 – Commode Liners

8.1 No. 66. Internal orangey-yellow C3 glaze which has run on to the rim with the greatest concentration indicating its position when fired. Not illustrated, three examples – one C3 variant, two C5.

8.2 No. 67. Internal wet-looking orangey-yellow colour C3 glaze.

8.3 No. 68. Internal dark olive green C13 variant with less flecking. Not illustrated, seven examples – one C3 variant, one C6 variant, three C5, one C13 and one C13 variant.

There are one hundred and three not illustrated bases – three unglazed, one unclassified (three bases fused together and multi-coloured due to several firings), twenty-two overfired, five underfired, three unclassified, six C2, eight C3 and two variants, seven C5, thirty one C6, thirteen C13 and four variants.

Number of vessels = 116.

HTNV9 – Chamber pots

9.1 No. 69. Overall wet-looking olive C5 glaze with flecks of iron which join up to produce longer runs. Not illustrated, two C6 variants.

9.2 No. 70. Internal olive green glaze which is a variant between C1 and C6, which could be due to vessel being underfired.

9.3 No. 71. Internal olive C5 glaze with dominant iron runs.

9.3 No. 72. Due to reduction of the vessel colour classification difficult. A greenish glaze appears around the rim.

9.4 No. 73. Totally unglazed and reduced slightly internally. Not illustrated, one C7 variant.

There are a further fourteen examples too small to classify but all showing handle attachments. Five unglazed, one C1, four C6 and one variant, three C13.

Number of vessels = 26.

HTNV10 – Jugs

10.1 No. 74. External wet-looking olive C5 glaze with flecks of iron which seem to join up to produce longer runs, this continues on the inner rim and below for approximately 3 cm. Not illustrated, five C6 variants.

10.2 No. 75. A complete vessel externally glazed in an olive C5 glaze with dominant iron runs. Not illustrated, two C6 variants, one with four circumferential lines on the rim normally only three.

10.3 No. 76. Overall dark olive wet-looking C7 glaze. Not illustrated one C2 variant.

10.4 No. 77. Totally unglazed and reduced, the blob of glaze is a very dark green.

10.5 No. 78. Totally unglazed.

10.6 No. 79. Totally unglazed. Bung hole constructed from external surface. Not illustrated, one other unglazed.

10.7 No. 80. Totally unglazed. Partially reduced. Not illustrated thirty three unglazed, seven of those reduced, seven extremely burnt, ten glazed internally – three C6, one C13, six burnt, two overall glazed – one C5 and one burnt.

10.8 No. 81. External pale olive C2 dull glaze underfired. Not illustrated, one C2.

10.9 No. 82. Totally unglazed.

There are five other examples too difficult to classify. Three handles – one C6 variant, one C8 and one C13. One body sherd with three thumb impressions possibly No. 74 and C6, one body sherd.

Number of vessels = 74.

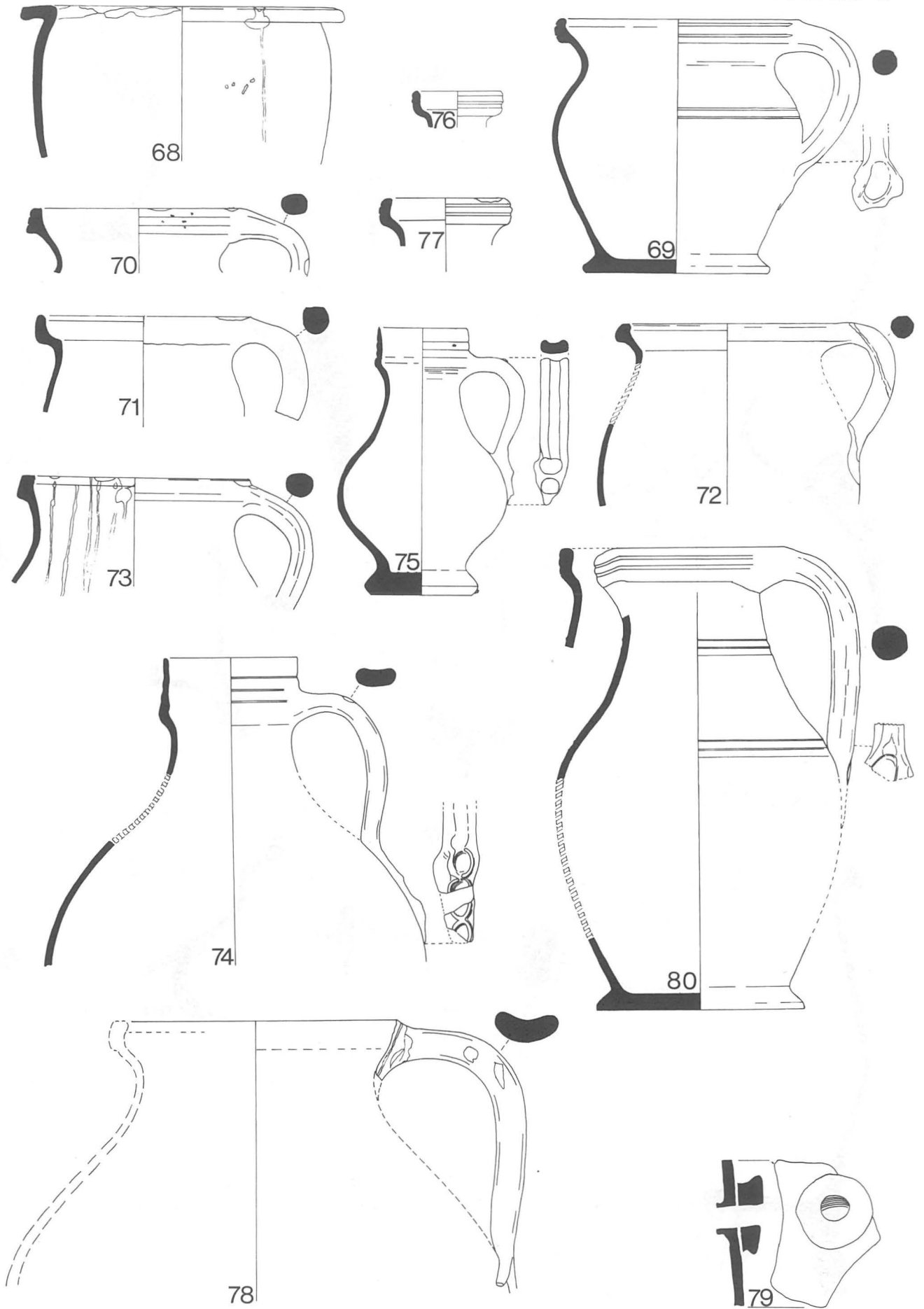


Figure 6. Horton: the pottery. HTNV8 Commode No. 68, HTNV9 Chamber pots Nos. 69-73. HTNV10 Jugs Nos. 74-80. At $\frac{1}{4}$ life size.

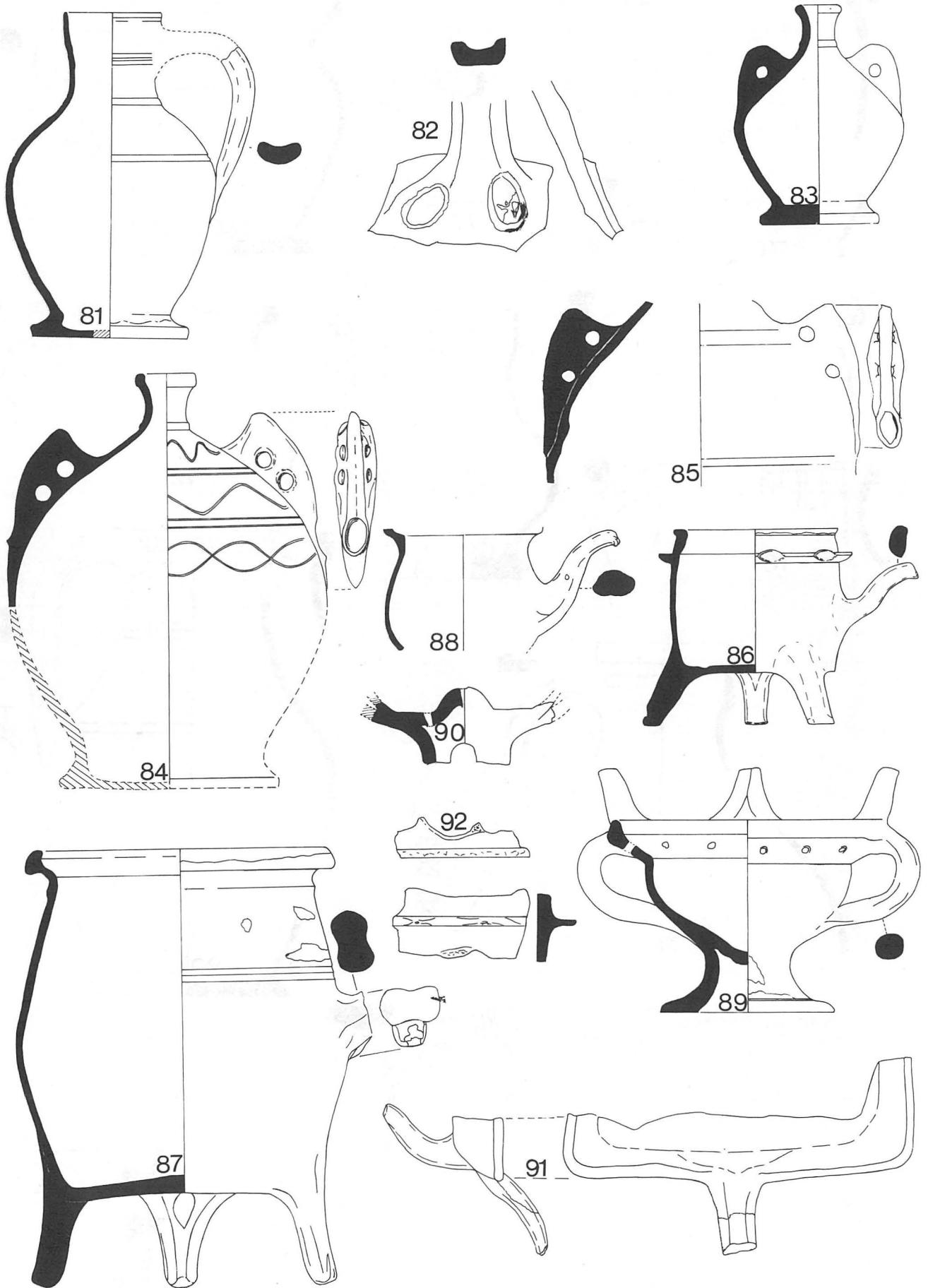


Figure 7. Horton: the pottery. HTNV10 Nos. 81 & 82, HTNV11 Costrel 83-85, HTNV12 Pipkin 86-88, HTNV13 Chafing Dish 89 & 90, HTNV14 Dripping Pan Nos. 91 & 92. At $\frac{1}{4}$ life size.

HTNV11 – Costrel

11.1 No. 83. A complete vessel, external olive glaze C5 variant.

11.1 No. 84. External wet-looking olive C5 glaze.

11.1 No. 85. External wet-looking olive C6 glaze.

Not illustrated, fifty-one examples classified by: Twenty-one bases, nine unglazed, two burnt, one partially glazed C6/13 variant, nine glazed – two C2, six C6 and one C2 variant. Three body sherds, one C6 and two C3. Thirteen rims, three C2 variants, one C3, four C6

and three unclassified. Fourteen handles, four C2, four C3, four C6, one C13 and one burnt.

Number of vessels = 54.

HTNV12 – Pipkin

12.1 No. 86. A complete vessel, olive C6 internal glaze. Not illustrated, one C5.

12.2 No. 87. Internal glaze which, due to reduction, is very dark indeed.

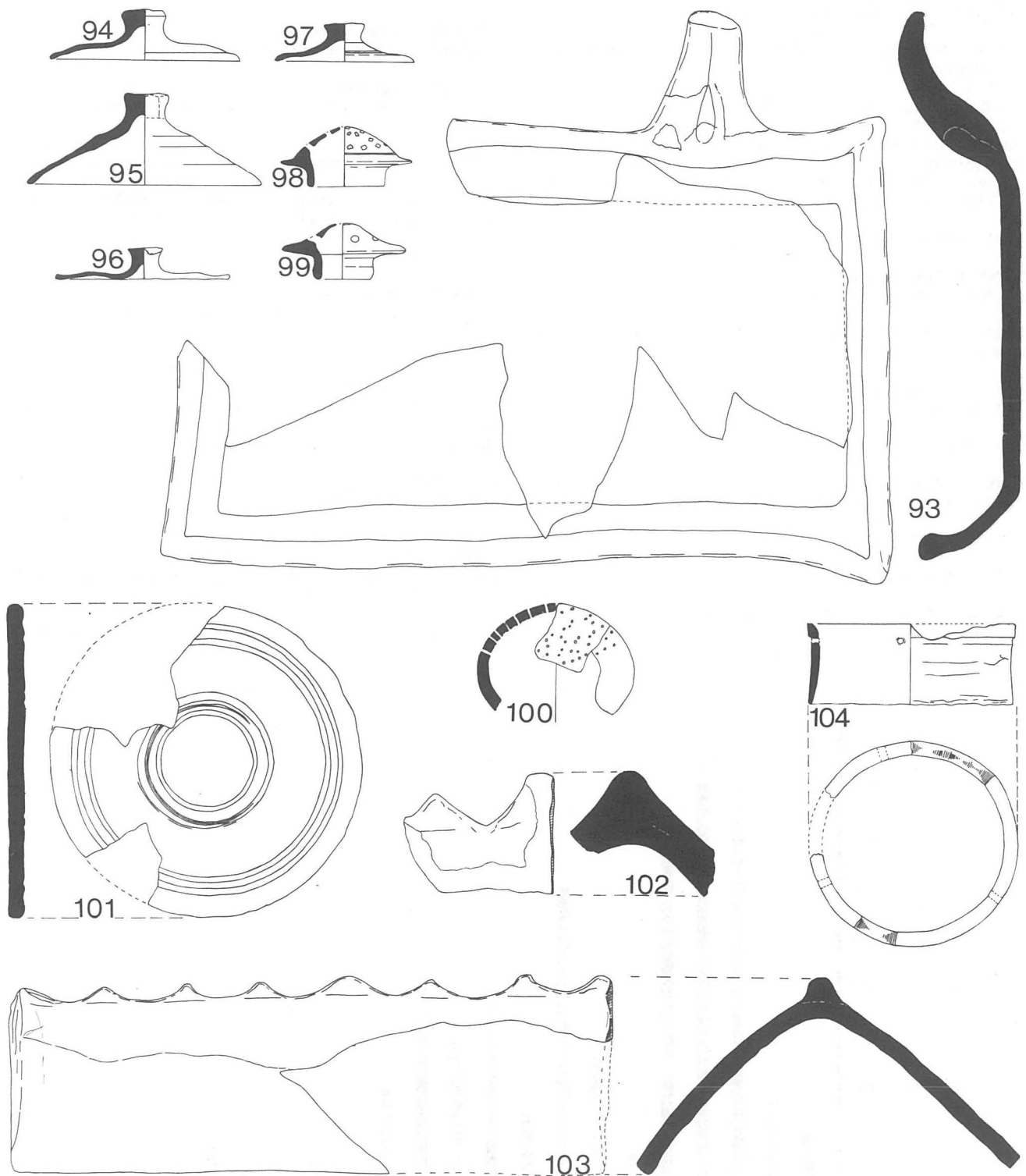


Figure 8. Horton: the pottery. HTNV14 Dripping Pan No. 93, HTNV15 Nos. 94-97, HTNV16 Fuming Pot Lids 98-100, HTNV17 Circular Flat Object No. 101. HTNV18 Ridge Tiles Nos. 102 & 103, HTNV19 Kiln Furniture No. 104. At 1/4 life size.

Three other examples, one C2, one C6 and one C13.

12.3 No. 88. Internal pale olive C1 variant glaze.

Sixteen further examples: one C5 variant, thirteen C6 variants and two C13. There are forty-eight other examples difficult to classify: Six bases, one C2, two C3, one C5 and two C6. Thirty-nine handles, twenty-two unglazed, fourteen reduced, three with drips of glaze. Three feet, two unglazed and one burnt.

Number of vessels = 71.

HTNV13 – Chafing dish

13.1 No. 89. Overall wet-looking olive C6 glaze.

13.2 No. 90. External wet-looking olive C6 glaze, internally the glaze changing to a C5.

Not illustrated, a further thirty-four examples: fifteen rims, one C1, one C3, one C5 variant, eleven C6 and one C13. Four bases, three unglazed, one partially glazed C6 with two handles and a body sherd from the same vessel. Twelve lugs, two C1, two C2, six C6 and two unglazed. One handle unglazed. One C3 with base and rim. One body sherd C3.

Number of vessels = 36.

HTNV14 – Dripping pans

14.1 No. 91. Internal wet-looking olive C6 glaze.

14.2 No. 92. Internal wet-looking olive C6 variant, slightly less iron running.

14.3 No. 93. Internal wet-looking orangey-yellow C3 glaze. Knife trimmed base.

Number of vessels = 3.

HTNV15 – Lids

15.1 No. 94. Totally unglazed. Signs of reduction.

15.2 No. 95. Totally unglazed. Not illustrated, one unglazed.

15.3 No. 96. Totally unglazed. Not illustrated, one unglazed.

15.4 No. 97. Totally unglazed, with a semi-circular scar 3 cm long by 1 mm wide.

One other sherd not classified.

Number of vessels = 7.

HTNV16 – Fuming pot lids

16.1 No. 98. A complete lid, orangey-yellow C3 glaze.

16.2 No. 99. A complete lid, dark olive-green C13 glaze.

16.3 No. 100. Totally unglazed. Holes are constructed from the exterior surface.

Number of vessels = 3.

HTNV17 – Circular flat object

17.1 No. 101. Totally unglazed and underfired.

HTNV18 – Ridge tiles

18.1 No. 102. External wet-looking pale olive C2 variant with more iron flecking.

18.2 No. 103. External pale olive C2 variant with heavy iron flecking.

Not illustrated, eleven examples, two unglazed, one burnt, four C2, one unglazed with drips of C3, two C6 and one C13.

Number of vessels = 13.

HTNV19 – Kiln furniture

19.1 No. 104. Overall orangey-yellowish-olive C1/3 variants.

Only one present.

Body sherds – 37.682 kilo.

Bases – 10.886 kilo. From the heavy pots of already represented forms.

Handles – 3.175 kilo. From forms already represented.

GLAZING

The pottery was lead glazed.

GLAZE COLOURS

Orangey-Yellow

C3. A wet-looking orangey-yellowish glaze with concentrated iron flecking joining up to produce longer runs.

C4. A wet-looking yellowish glaze with a few spots and flecks of iron.

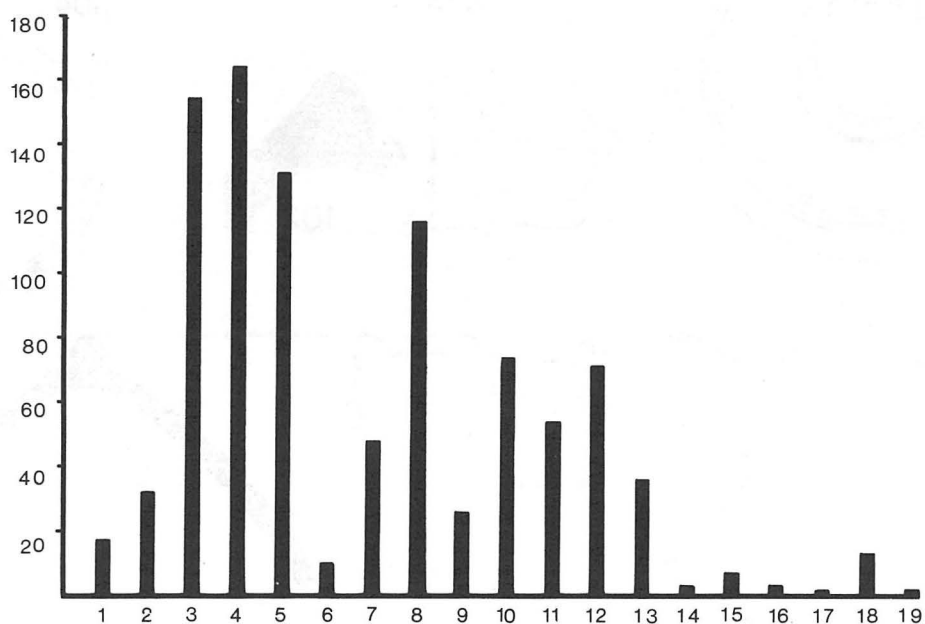


Figure 9. Horton: graph: absolute frequency of pottery types. Vertical scale is numbers, horizontal pottery type, number.

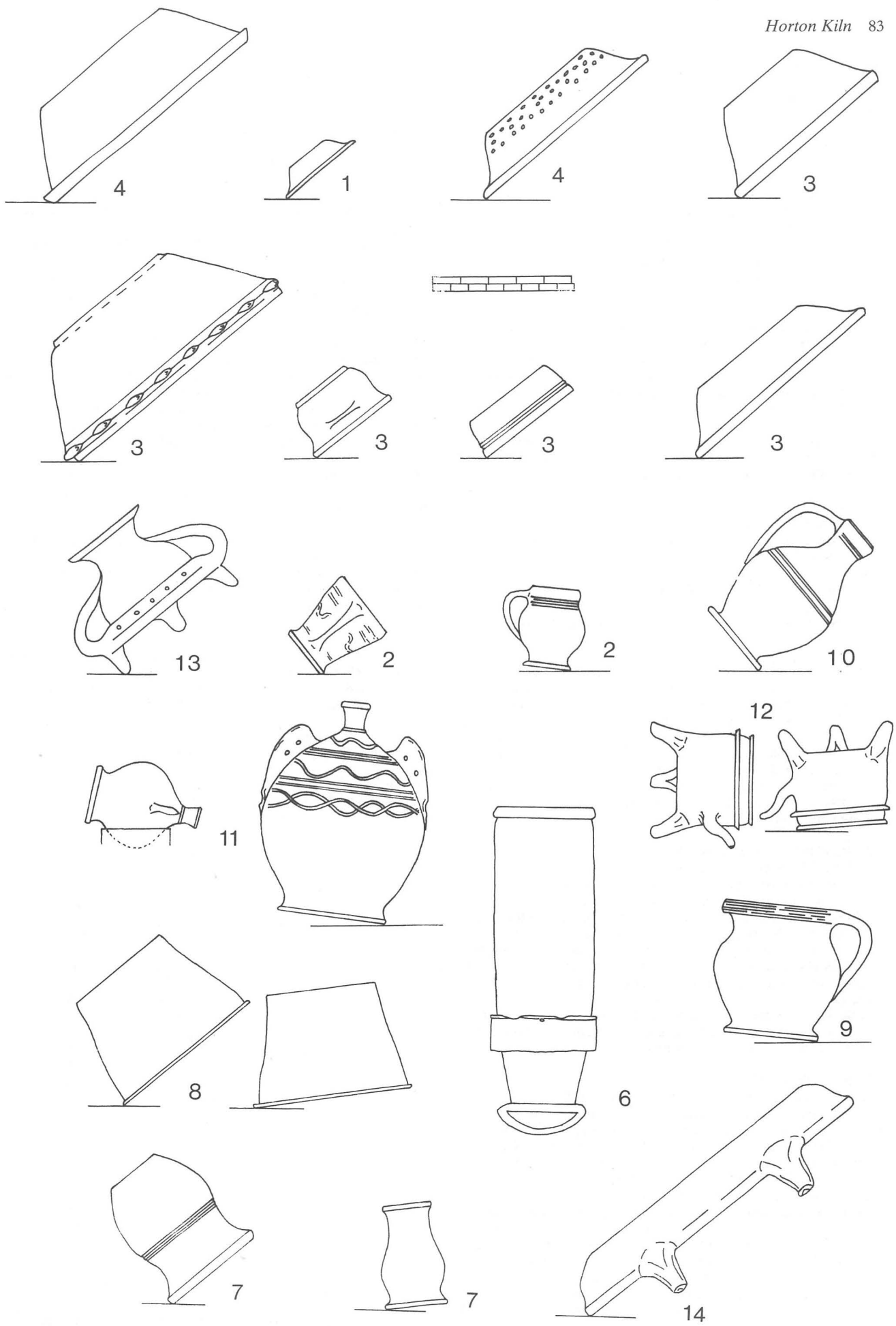


Figure 10. The firing positions of reconstructed pottery as indicated by glaze run.
Types 8, 11 and 12 show two different firing positions.

Pale Olive Green

C1. A wet-looking glaze, very pale olive-green with pale orangey patches containing flecks and spots of iron ranging in size from barely visible to 2 mm.

C2. A very wet-looking, darker version of C1 but with much less iron flecking.

Olive Green

C5. A wet-looking orangey-pale olive-green glaze with very dominant iron runs.

C6. A very wet-looking light olive-green glaze with fairly dominant iron flecking which join up to produce longer runs.

Dark Olive

C7. A wet-looking dark olive-brownish glaze which appears in patches and smears.

C8. A wet looking dark olive glaze with brown iron flecking, unlike C7 the olive colour is dominant, whereas in C7 the brownish flecking is dominant.

C13. The colour of this glaze is as a result of overfiring. Wet-looking dark olive-green with dark brown spots, flecks and shiny metallic streaks joining up to give longer run.

Green

C9. Dark bottle green.

C10. A wet-looking glaze with patches varying between a darkish emerald to a yellowish colour.

C11. Similar to C10 but the emerald green is more dominant.

C12. A wet-looking glaze in varying shades and patches of emerald green.

As is clear from the catalogue some of forms 1, 2 and 3 (nos. 11 and 12 only) occur with either the usual very variable orangey-yellow to dark olive green glaze found on the rest of the types, or with a vivid green glaze presumably produced by the addition of copper to the glaze. This is particularly clear on no. 5 where despite overfiring the green is visible on the rim. Although these forms are, on the whole, thinner-walled than the others and the fabric paler, with the naked eye it is difficult to see any difference in fabric between these vessels and the rest of the material. Analysis of the fabric(s) is being undertaken.

FIRING POSITION OF RECONSTRUCTED POTTERY AS INDICATED BY GLAZE RUN

The most interesting aspect of these reconstructions shows that types 1, 3 and 4 were fired on their sides, and not according to the usual known country pottery custom of stacking one on top of the other (Coleman-Smith/Pearson 1988 P 82 fig. 34). With one exception (type 6) all the vessels are fired in a tilted position. The glaze on the vessel concentrates into a globule on the side which is pointing downwards and the iron flecking also runs towards that point. (Plate 1.)

Little kiln furniture has been found that might throw further light on the mechanisms of the stacking pattern and it is hoped that further excavation will help to clarify this point.

DISTRIBUTION AND DATING

Post medieval pottery groups from Dorchester, Exeter, Salisbury and Portsmouth have been examined to see if they contain material from this Horton kiln. Surprisingly, no certain Horton pottery was seen in these large collections, with the exception of Salisbury, where one example of type 6 (later described) was identified and two chafing dishes possibly of type 13 (currently not available for study) already published from Portsmouth (Fox and Barton 1986, fig. 49 no. 18; fig. 52 no. 9). The only other group of Horton pottery identified (apart from kiln material) is a group from Lodge Farm, Pamphill only one and a half miles from the kiln (Draper in Papworth, forthcoming). The potter must have been selling his wares and presumably Horton pottery will be discovered as more groups are excavated. The date of the pottery can, however, be established from parallels in published groups listed below and from dated material.

HTNV1 – *Saucers*. Saucers form no. 3 finds a fairly broad parallel

from Donyatt (Coleman-Smith and Pearson 1988, fig. 81 no. 8/7) dated to 1600-1650.

HTNV2 – *Mugs*. Mug form no. 5 is very similar in its upper parts to English Delft Ware (Lipski and Archer 1984, no. 722, dated 1644). No. 5 can also be paralleled with Midland Black Wares (Brears 1971 p. 37 fig. 5) of the early 17th century. This vessel shows circumferential incised lines, but is more dumpy in profile.

Mug form no. 10 is fairly paralleled with kiln material from Cove, Hampshire (Haslam 1975, p. 185 fig. 11 no. 128) citing parallels dated 1628-1642.

No. 10 can also be compared with Midland Black Ware (Brears 1971, p. 37 no. 6) dated early 17th century; and the shape from a Civil War context at Basing House (Moorhouse 1970, p. 52 fig. 12 no. 75) dated 1668. Also in English stoneware (Hildyard 1985, no. 46) dated 1668.

HTNV3 – *Bowls*. Bowl form no. 20 can be paralleled in a large group from Exeter (Allan 1984, fig. 87, no. 2010) which is well dated to 1600 by the imports it contains. The profile is similar except at the rim where the Horton type is slimmer.

Bowl form 17 is a close parallel to another Cove form (Haslam 1975, fig. 6 no. 49) 1625-50, with the exception that on the body there are two incised lines and only a single on the Cove example.

HTNV6 – *Butter pot*. Butter pot form no. 52 can be paralleled with a similar but unstratified vessel found near Clarendon Palace, Nr Salisbury, Wilts (in Salisbury & South Wilts Museum: 73/1961).

HTNV9 – *Chamber Pots*. Chamber pot form 69 can be paralleled with a group from Exeter (Allan 1984 fig. 93 2138) dated to the early 17th century. The Exeter handles commence from the rim although on 69 a fraction below. Both show a foot on the base, but 69 is knife trimmed and the belly is slightly higher than the Exeter example.

HTNV10 – *Jugs*. Jug form 75 can be paralleled with Delft Ware (Lipski/Archer 1984 wine bottles page 718) dated 1641.

Jug form 81 can be paralleled with Donyatt (Coleman-Smith and Pearson 198, fig. 67 no. 4/215) dated 1600-50.

HTNV11 – *Costrel*. Costrel form 83 can be paralleled with Midland Blackware (Brears 1971, p. 37 no. 8) dated early 17th century.

HTNV12 – *Pipkin*. Pipkin form can also be paralleled at Cove, Hampshire (Haslam 1975, p. 180 no. 92) dated 1625-50.

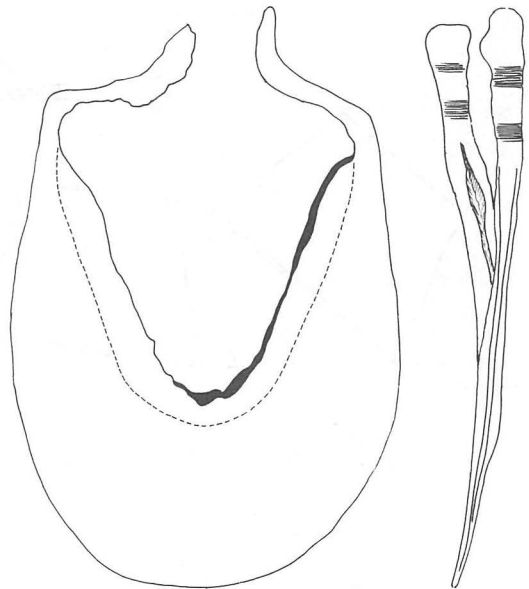


Figure 11. Horton. Iron sheathing from a spade, unstratified, but perhaps associated with the pottery making process. At $\frac{1}{4}$ life size.

HTNV13 – *Chafing Dish*. Sherds of two chafing dishes similar to no. 89 from Oyster Street, Portsmouth have already been published as coming from the Horton kiln (Fox & Barton 1986, fig. 49 no. 18, not pierced under the rim; and fig. 52 no. 9 pierced). They were found in contexts dated by imports to circa 1560-1580 (the unpierced one) and circa 1630-1660 (the pierced one). The latter is the closer parallel to the Horton chafing dish.

DISCUSSION

This site the first to be excavated in the East Dorset Group known as The Verwood & District Potteries, and the comparative material listed above shows that it was in production in the middle 17th century – most likely the 1640s and 1650s. The mug, chafing dish, saucer, costrel, ring necked jug, chamberpots and pipkins are particularly dateable because of their distinctive forms. At this time the range of country pottery ware was at its peak although one commonly found type, the candlestick, appears to be absent. This could be due to the use of rush or other forms of lighting in the area or the production of candlesticks on another site.

Although well made, the pottery is essentially plain, not decorated with slip and is therefore dissimilar to the Donyatt pottery (Coleman-Smith & Pearson 1988) which was producing at a similar date mostly slipware.

The large group of pottery from a kiln at Cove in the extreme north-east of Hampshire dating from c. 1625-50 is more comparable to the Horton material. The Cove pottery is not slip decorated, but does have more decoration (incised lines etc.) than Horton. Present there are money boxes, candlesticks and condiment dishes, not found at Horton, but otherwise the products are similar.

POSTSCRIPT

It proved possible in 1988-9 to undertake further small-scale excavation on the site, and it is hoped that more work will follow in 1990. These excavations will be published along with analysis of the fabrics in a subsequent volume of these *Proceedings*. The pottery remains with the Verwood and District Potteries Trust.

ACKNOWLEDGEMENTS

I am grateful to David Algar and Tony Light for all their assistance in the writing of this report; to Tony Light and Steve Wharton for the pottery drawings, and to Michael Copland-Griffiths for plate 1 and for figure 2 no. 2.

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Excavations at 9 Bridport Road, Dorchester

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SUMMARY

This report outlines the results of a short excavation undertaken in November 1989 prior to the development of the area adjacent to 9 Bridport Road, Dorchester for a new County Records Office. The archaeological potential of the area had been demonstrated in 1971 by the discovery of a late Roman cemetery on the site of the neighbouring Crown Building. However, it became clear that considerable disturbance had taken place on the present site during the late 19th century for the construction of an army barrack block. Only a single late Roman ditch, representing earlier occupation, had survived this.

INTRODUCTION

The high archaeological potential of this area was first demonstrated in 1971 by the discovery of a late Roman cemetery during the construction of the neighbouring Crown Building (Green *et al.* 1981). In view of this, the Birmingham University Field Archaeology Unit was contracted by Dorset County Council to undertake an archaeological investigation prior to the development at 9 Bridport Road of a new County Records Office.

The work was carried out during November 1989 and directed by Peter Leach and the author, with the assistance of Ed Newton, George Luke, Richard Turnbull and Quentin Hutchinson. Ed Newton produced the site plans and the figure drawing. I am also grateful to Laurence Keen (County Archaeological Officer), Hugh Jaques (County Archivist), Mr F. P. Pitfield (County Architects Office) and Major Carrol (Dorset Military Museum) for their valuable information and assistance. Peter Leach edited the text of this report. Copies of the site archive will be deposited with the Dorset County Museum and the National Sites and Monuments Record Office.

THE SITE

Location and historical background

The site is to the west of Dorchester town centre, on the north side of Bridport Road and immediately to the east of the Western Region railway line (Figure 1a). This area lay outside the Roman town walls between the roads to Exeter (Bridport Road) and Ilchester (Poundbury Road).

The triangle of land formed between these two roads and the railway appears to have been first used as a military base during the 1860s by the Dorset Militia (Draper 1984 no. 167). The site subsequently became the main depot for the 39th of Foot in 1879 (Popham 1970, 25) and two years later for the Dorsetshire Regiment, following its formation in 1881 from the 39th and 54th of Foot (*ibid.*, 53). Many of the existing buildings including 'The Keep' (built in 1879) date from this time. Ernest Young's detailed description of Dorchester states that the barracks were completed in 1879, at a cost of £40,000 (Young 1886, 77). The barracks to the north of the Poundbury road (the Marabout Barracks) have a longer history. They were established in 1794 to accommodate the Dorset Volunteer Rangers, later to become the Queen's Own Dorset Yeomanry, and were completed in 1795 (RCHM(E) 1970a, 115-116).

The full layout of the Dorsetshire Regimental Barracks appears on the 1888, 1:500 O.S. map. It underwent a series of minor changes until the amalgamation of the Dorsetshire and Devonshire regiments in 1958 and the abandonment of the Dorchester depot. The main barrack block in the south-western area of the site was subsequently demolished and in 1971 a government office block, the Crown Buildings, was constructed in the middle of the former barrack square. Other buildings within the former depot have been retained and subsequently adapted for non-military use.

Archaeological background

A number of cemeteries serving the Roman town of Dorchester (*Durnovaria*) have been identified to the west of the town walls. Numerous burials have been noted in the vicinity of the Bridport Road site (RCHM (E) 1970b, 582-583) and the extensively investigated cemetery of Poundbury (Green 1976, and forthcoming) lies 500 metres to the north. During the construction of the Crown Building approximately 50 graves, aligned east-west, were recorded. These were located within a 25-metre strip, bounded by linear gullies with an approximate north-south orientation (Green 1981). The most significant burial was identified as that of a young man, who had been placed in a lead coffin which had then been half

filled with burnt gypsum powder. The particular conditions of the burial allowed the survival of a head and pigtail of red hair.

The investigation reported upon here was located immediately to the west of the Crown Building site and principally to the rear of 9 Bridport Road, formerly the Regimental Institute (Fig. 1b).

THE EXCAVATION

Method

The excavation covered a total of c. 850 square metres and was divided into two areas. Area 1 extended from the north-west side of the existing building and Area 2 was adjacent to its north-east side. The area had previously been used as a car park and as a site for temporary office accommodation. A machine was used to remove the surface tarmac and underlying hardcore. The site was then cleaned using shovels, hoes and brushes to facilitate the definition of archaeological contexts. Numerous features were observed cutting the truncated chalk natural, the top of which lay between 0.2 and 0.3 m below the tarmac. These features were recorded, photographed and drawn and a small selection were then sampled by excavation. A full record of this data is to be found in the site archive.

Archaeology

Phase 1 – Roman

The earliest feature on the site proved to be a linear ditch, orientated approximately north-south (Feature 10), with a maximum recorded width of 0.86 m and depth of 0.36 m. It became narrower and shallower towards its southern end where it appeared to have been truncated by a subsequent terracing of the site for the barrack complex. The excavated section was 8 m long and had a bowl-shaped profile. It contained a brown silty fill with fragments of chalk, Roman pottery, flint and animal bone (Context 008).

The extent of the levelling for the barracks is indicated by a two-metre high bank retained alongside the cutting for the railway, which appears to preserve what remains of the original ground profile. This terracing makes the survival of any Roman features to the west of the ditch (Feature 10) unlikely. The northern and eastern parts of the site, lower down the original slope, would have been less affected by this terracing, as the progressively better survival of Feature 10 northwards demonstrates. The depth of the grave cuts recorded from the Crown Buildings site (up to 1.75 m) suggests that had similar burials been present in this area, some evidence should have survived, despite the additional disturbances resulting from the barrack-block construction and the insertion of drains.

Phase 2 – Early Barracks

The Roman ditch (Feature 10) was cut by a series of linear drainage trenches (Features 6, 7 and 8) orientated northwest-southeast. Modern drainpipes and other occasional artifacts within their rubble and gravel fills (004, 005 and 006) clearly indicated a recent date.

A solid, green-grey concrete foundation, with a similar northwest-southeast orientation, was observed in the northern corner of the excavation (Feature 11). This matches the location of part of the original south-west face of the main infantry barrack-block recorded on the 1888 1:500 O.S. map. Several photographs in the Dorset Military Museum and the Dorset County Museum show that this was a three storey brick building with a pitched slate roof (Plate 1).

One or two of the drainage trenches appear to have serviced an outbuilding (Feature 23), with a similar green-grey concrete foundation, located to the southwest of the main building. The drainage trenches, together with the appearance of this outbuilding on the 1888 map, suggest that it was a latrine block.

Phase 3 – Late Barracks

The drainage trenches of the early barrack phase were subsequently cut by the foundation trenches for two extensions added onto

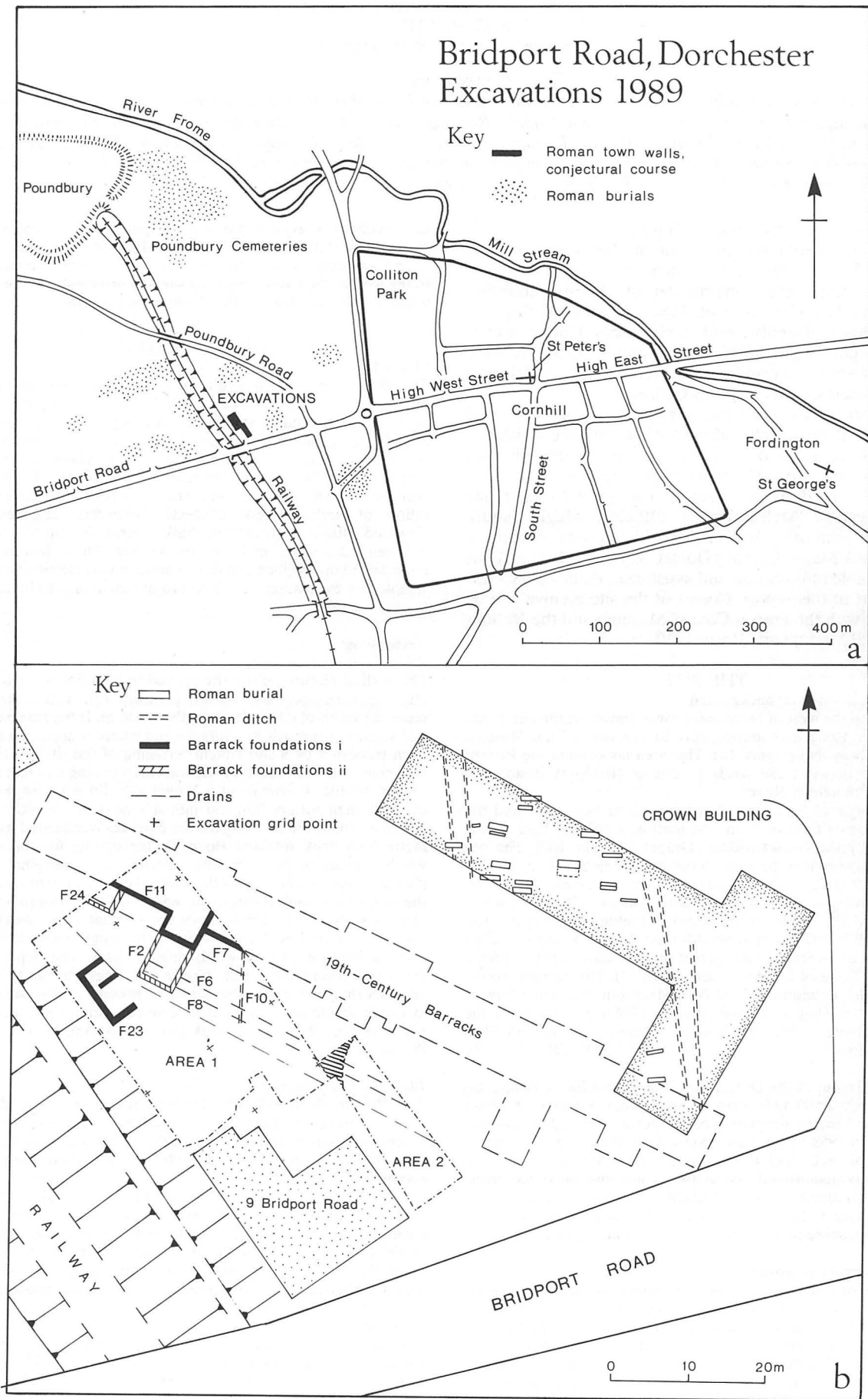


Figure 1: Excavations at Bridport Road.

the south-west face of the barrack-block. The larger of the two extensions (Feature 2) measured 10 m by 5.5 m, while the smaller (Feature 24) protruded 3.2 m beyond the original face of the building. Fragments of the lower courses of a brick superstructure overlying the solid concrete foundations of both extensions had survived. The extensions are clearly part of a series of alterations which appear on a plan of the barrack-block before it was demolished, now held in the County Architects Office (DRG. No. E. S. 1061). A complex of drainpipes within one of the walls (Feature 5) of the larger extension suggests that at least part of this served as a new latrine block replacing the outbuilding (Feature 23).

A new system of service trenches (including Features 19-22) was developed to replace the earlier drainage system, which had become redundant following the construction of the extensions.

FINDS

The only finds of pre-19th-century date came from the fill of the ditch (Feature 10) and are summarised below. Artefacts relating to the 19th-century barracks and later disturbances included fragments of ceramics, glass, building materials, pipes, and occasional metal objects, but were relatively sparse and are not catalogued in detail.

Pottery

35 sherds of Roman pottery were recovered from the fill of Feature 10 (008), representing a minimum of 4 vessels.

Vessel 1 – Black burnished jar with everted rim. Band of incised cross-hatching on body. Similar vessels recovered from Colliton Park (Aitken, G. and N. 1982, Fig. 17 vessel no. 4) and elsewhere in Dorchester (Draper and Chaplin 1982, Fig. 19) suggest a 4th-century type.

Vessel 2 – Black burnished bowl with flanged rim.

Vessel 3 – Black burnished bowl with flanged rim.

Vessel 4 – Red colour-coated mortarium with upright rim and angular, rouletted flange. Oxford colour-coated ware, type C100 (Young 1975, Fig. 67, date range A.D. 300-400+).

Flint

A roughly-worked core and 15 waste flakes were recovered from the fill of Feature 10 (008).

Animal Bone

52 fragments of bone were recovered from Feature 10 (008). The identifiable majority were bovine and included fragments from a scapula, a long bone and a premolar.

DISCUSSION

Roman Period

The poor survival of Roman deposits, caused by the severely truncated and disturbed nature of the site, limits any inferences that can be made concerning suburban roadside development in this area of Roman Dorchester.

The alignment of the ditch (Feature 10) has a similar orientation to the ditches noted during the construction of the Crown Buildings (Fig. 1b), and may belong to a common system of 4th-century enclosures fronting onto the Exeter (Bridport) Road. The absence of any evidence for graves in the south-eastern parts of the excavation could suggest that the area between the Crown Building's cemetery and Feature 10 was not used for burials. However, the considerable truncation of the area to the west of Feature 10 does not rule out the possibility that features or graves with relatively shallow cuts could originally have existed here. The possibility of domestic occupation in this area must also be considered, particularly in view of the domestic nature of the pottery and animal bone from the fill (008) of the ditch (Feature 10).

The evidence of flint working, represented by the core and flakes, presumably originates from an earlier phase of prehistoric activity in the area, not otherwise represented on this site.

The Barracks

The excavation revealed a section of the foundation for the

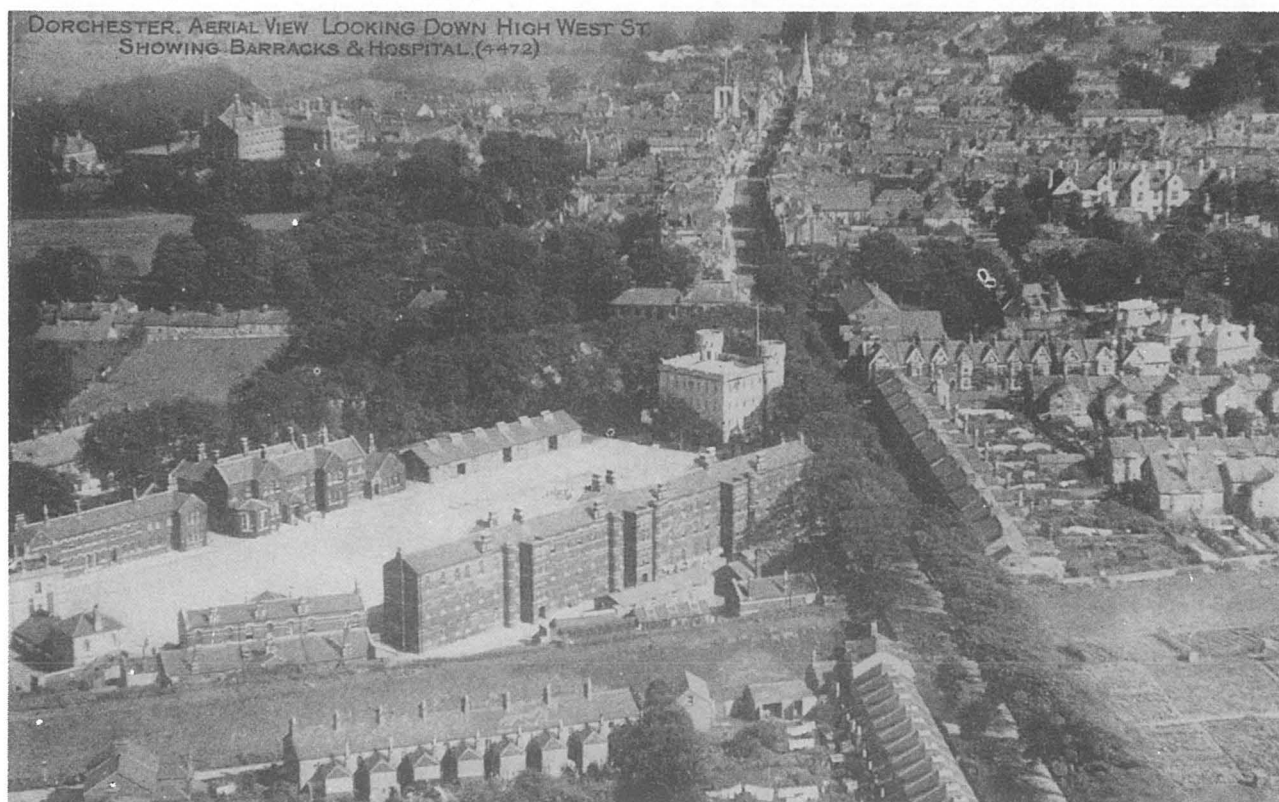


Plate 1: Aerial view of the Dorchester Barracks looking east, 1920s. The main barrack block is in the foreground.
Photo: Dorset County Museum.

south-west face of the main infantry barrack-block within the depot barracks for the Dorsetshire Regiment, together with its associated service trenches and outbuildings. This was an elongated, three storey brick structure, constructed together with the rest of the depot, before 1879. The information recovered appears to confirm the evidence for the development of this building obtained from successive maps and plans.

The most significant development recorded related to the construction of a number of extensions onto the south-west face of the building. The excavation indicated that at least one of these (Feature 2) was partly used to accommodate a new latrine block, replacing an outdoor one that was subsequently demolished (Feature 23). These alterations do not appear on the 1:2500 1929 O.S. map and may be contemporary with the construction of what was the Regimental Institute (the present building at 9 Bridport Road) during the late 1930s.

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The Beaches of Lyme Bay

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SUMMARY

The beaches of Lyme Bay consist largely of flint and chert shingle, with some sand, derived from eroding cliffs and sea floor sources. They include Chesil Beach, which shows lateral grading from small pebbles in the west to large pebbles in the east. Several other beaches on the north coast of Lyme Bay also show lateral grading, low beaches of poorly sorted sand and shingle to the west becoming higher and often wider, coarser and better sorted to the east. Lateral grading is attributed to an alternation of eastward beach drifting by strong south-westerly wave action with westward movement of finer material by gentler south-easterly wave action. Whereas Chesil Beach is a relict shingle formation, the other beaches are still receiving small quantities of sand and shingle. Cliff erosion and slumping are more rapid behind low beach sectors than where a high, wide accumulation of coarse shingle protects the shore. It is suggested that artificial beach nourishment should be used as a method of coastal protection on the shores of Lyme Bay.

INTRODUCTION

The beaches on the north coast of Lyme Bay are mainly of shingle with some sand. They occupy a series of compartments (Fig. 1), separated by headlands, or rocky and bouldery shores known as 'ebbs', with a large promontory running out to Portland Bill to the south-east. The several compartments are of varying length and the beaches show contrasts in form and composition. Most are backed by steep cliffs, but part of Chesil Beach is a shingle barrier in front of a series of swamps and lagoons, including The Fleet (Bird, 1972; Carr and Gleason, 1972).

The features of Chesil Beach have been discussed in numerous papers, reviewed succinctly by Carr and Blackley (1974). The beach extends about 28 kilometres from Bridport Harbour, at West Bay, to Chesilton in the east. It consists almost entirely of brown flint and chert shingle with small proportions of quartzite, limestone and other materials most of which have come from Lyme Bay, either eroded out of retreating cliffs or washed in from deposits or outcrops on the sea floor. As is well known, the beach around high tide level shows lateral grading from small pebbles (mean longest diameter about 0.7 centimetre) at the western end to large pebbles (mean longest diameter about 5.5 centimetres) at the eastern end (Carr, 1969).

Carr and Blackley (1974) attributed this lateral grading to a combination of factors, including a lack of supply of new pebbles (this is a relict beach) and a progressive increase in

wave energy from west to east along the shore. Similar lateral grading of beach material was described from the north coast of Hawke Bay, New Zealand, by Marshall (1929), who attributed it primarily to longshore attrition of cobbles and pebbles delivered to the mouth of Mohaka River as they drifted eastward along the shore, the modal size diminishing eventually to sand. By contrast, the grading of Chesil appears to have resulted from sorting of the available pebbles by wave processes, although there must also have been some gradual attrition.

This sorting could be due to alternations of eastward drifting of shingle along the beach face by strong waves arriving from the west to south-west with westward drifting of the smaller pebbles by weaker waves arriving from the south to south-east (Fig. 2). The wind rose from Portland Bill (Fig. 1) indicates the prevalence of strong westerlies and south-westerlies, producing storm waves, which are accompanied by Atlantic swell, while waves generated by southerly and south-easterly winds occur less frequently.

Carr and Blackley (1974) noted that some large pebbles, cobbles and boulders had been combed down below low tide level into a nearshore zone of poorly sorted material, and that a few larger stones had been thrown over on to the landward slope of the shingle barrier during major storms. With these exceptions, the size of the shingle remains similar along transects from the beach face over to the landward slope, which implies that sorting has long been the

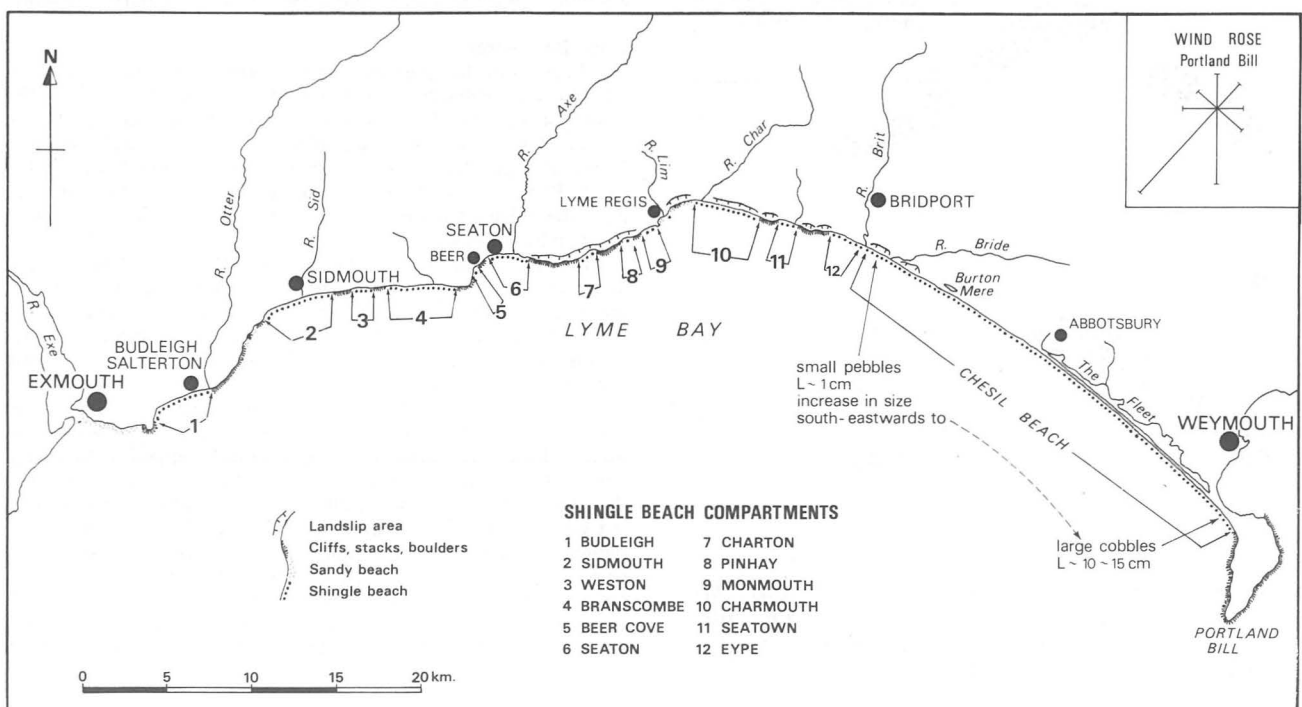


Figure 1. Beaches of Lyme Bay. Insert: Wind Rose (Beaufort scale >4) for Portland Bill.

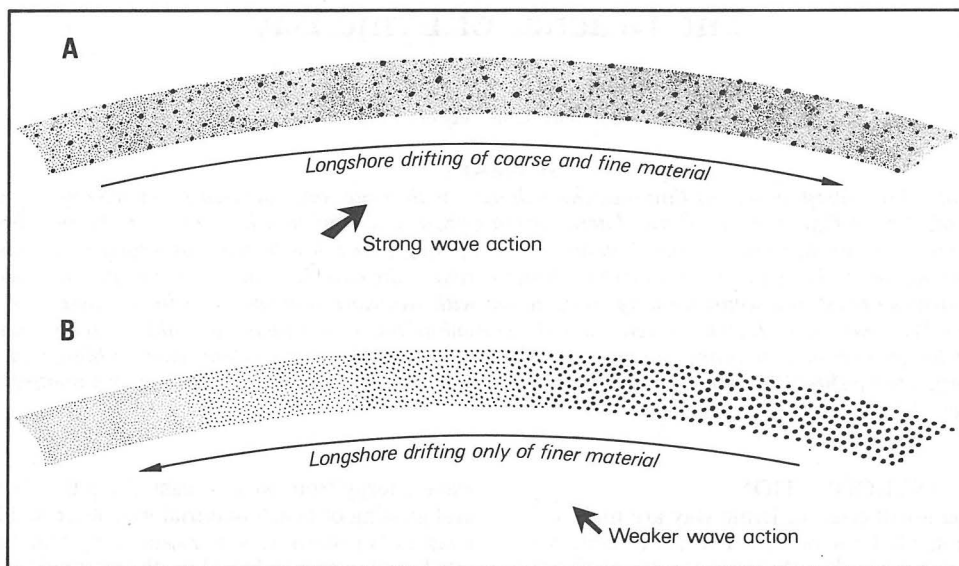


Figure 2. Development of lateral grading on a beach subject to strong wave action from one direction alternating with weaker wave action from the other.

dominant process (Fig. 3, A). If attrition has reduced the calibre of shingle on the wave-agitated beach face (Fig. 3, B), the finer products must have been removed westward. This may account for the arrival of small pebbles in sufficient numbers to prograde the beach immediately east of Bridport Harbour in recent decades. (Plate 1).

The long debate on the features of Chesil Beach has included little reference to the other beaches on the north coast of Lyme Bay, which will be described and discussed in a west-to-east sequence. Fig. 1 indicates their distribution, but reference should be made to Ordnance Survey 1:25,000 maps for local detail.

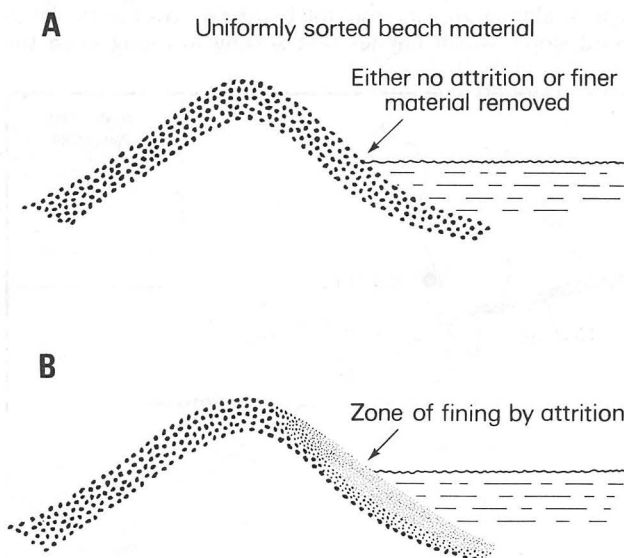


Figure 3. A beach remains uniformly sorted (A) where there is no attrition, or where material reduced in size by attrition is removed offshore or alongshore. Alternatively, the finer material may be retained as a beach face veneer (B).

BEACH DESCRIPTION

Description of a beach in terms of grain size is fairly simple on well-sorted shingle beaches, like Chesil Beach, where a reasonable estimate of modal size can be obtained after averaging the long diameters of a sample of 500 pebbles (Carr, 1969). On well-sorted sandy beaches, granulometric parameters can be assessed by sieving and weighing samples of dried sand (Bird, 1971). On the north shore of Lyme Bay, however, there are beach sectors where the sediment ranges from sand to cobbles, arranged in patterns which may include ridges and swales, berms (terraces), cusps, strips or randomly scattered. The distribution of beach material by grain size can also change rapidly, especially during stormy periods. For example, the beach at Charmouth shows much variation: after calm weather (as in the summer of 1989) the proportion of fine sand and shingle on the beach face is high, but during rough weather much of the sandy material is withdrawn by storm waves, leaving behind a relatively coarse shingle beach.

In these circumstances, sampling and statistical analyses of granulometry present many difficulties, but for the purposes of the present discussion a qualitative description is sufficient, using the well-known Wentworth classification (sand 0.6-2 mm, granules 2-4 mm, pebbles 4-64 mm, cobbles 64-256 mm, boulders >256 mm).

Lyme Bay beaches

The beaches of the Exmouth coast are sandy, but east from Littleham Cove a pebble beach extends past Budleigh Salterton to the mouth of the Otter River. This does not show well-defined lateral grading, but consists of large pebbles from the Budleigh Salterton Pebble Beds, of Triassic age, which outcrop in the cliffs west of the town (Plate 2) and on the adjacent sea floor. Erosion of the red clays has released these hard quartzite nodules, which have been piled up by storm waves.

North-east from Otterton Point high cliffs of red Triassic sandstone are fronted by a generally rocky and bouldery shore. In coves such as Chiselbury Bay and Ladram Bay there are beaches of swash-piled grey gravel, derived from conglomeratic outcrops in the nearby cliffs and from cliff-top deposits of flint and chert gravel.

Beneath the cliffs of High Peak the foreshore is rocky, but becomes sandy under Windgate, as the shore curves towards Sidmouth. There are pocket beaches of gravel trapped in caves and coves, then a patchy upper beach of mainly small brown flints develops, and becomes wider and higher eastward, with an increasing proportion of larger grey and white pebbles. Towards Connaught Gardens the sandy foreshore is backed by a swash-piled upper beach 4 metres high and up to 20 metres wide, mainly of large well-sorted grey pebbles. This beach therefore shows a grading from relatively fine, poorly sorted shingle (with sand) at the western end towards coarser and well-sorted shingle at the eastern end.



Plate 1. The western end of Chesil Beach at Bridport Harbour (West Bay), looking towards Eype. The harbour breakwaters have intercepted westward-drifting small pebbles to form a prograded beach. Beyond them the beach is long and narrow, and cliff recession has been halted by the building of an esplanade.



Plate 2. The pebble beach west of Budleigh Salterton, derived from the pebble beds outcropping in the adjacent cliff.

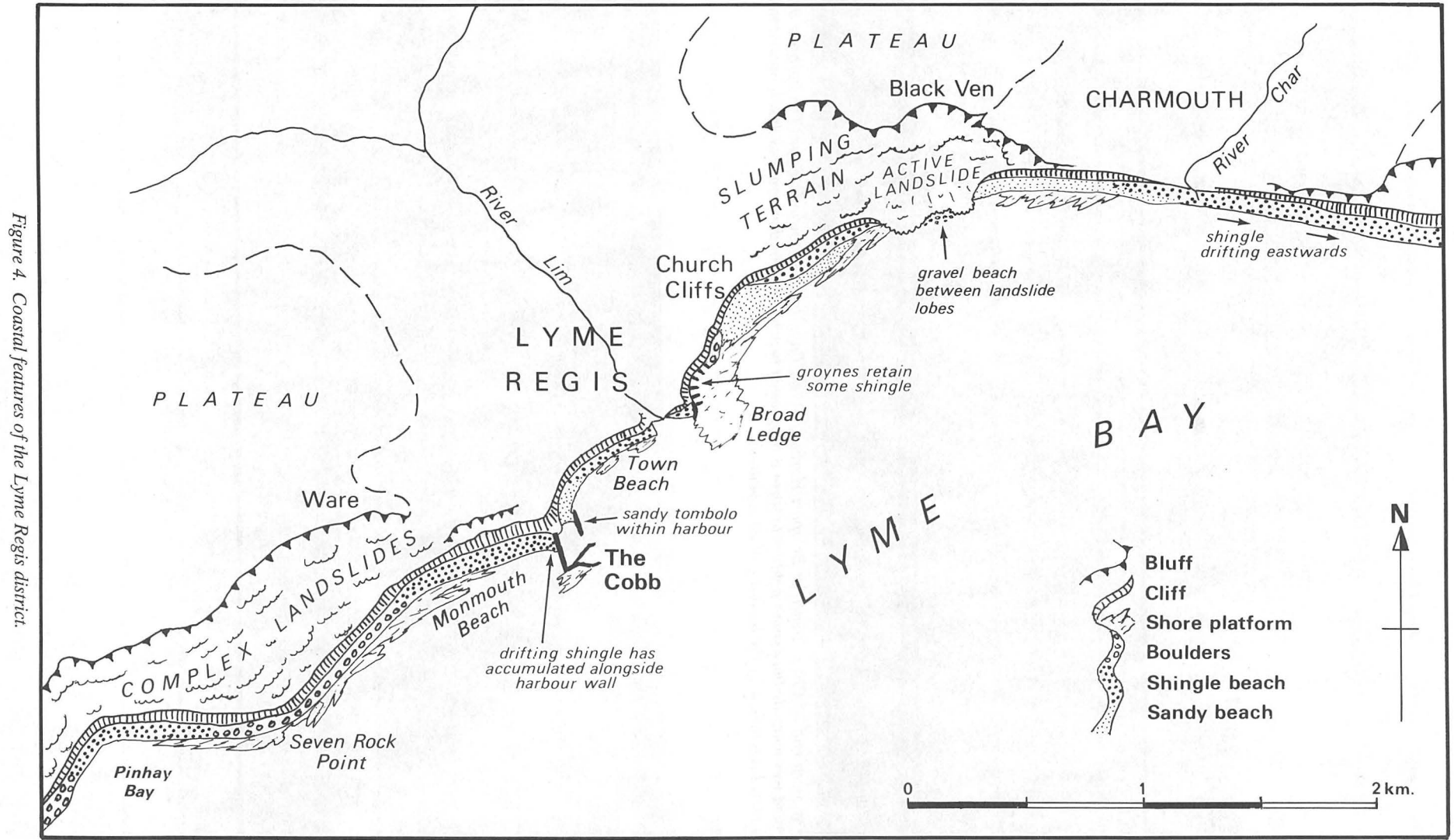


Figure 4. Coastal features of the Lyme Regis district.

The beach in front of Sidmouth esplanade is a more uniform mixture of large and small pebbles, with some sand, continuing eastward beneath high red cliffs of Permo-Triassic sandstone and marl, past the mouth of the Salcombe valley, to end against the boulders of Hook Ebb.

At Weston Mouth shingle extends in front of the cliffs on either side of the deeply incised Weston valley. At the western end the pebbles are small and scattered, and the beach generally sandy, but to the east the shingle coarsens and the beach becomes higher and wider as it runs behind a bouldery foreshore, Weston Ebb. It comes to an end against fallen blocks of Upper Greensand and a sector of large boulders, but resumes in Littleton Shoot, the cove to the east.

The beach in Littleton Shoot is of coarse shingle, which extends past promontories to Branscombe, and on to the Hooken cliffs. Beer Cove is occupied by a pocket beach of large grey pebbles, retained by a small groyne at the eastern end. From Seaton Hole a broad shingle beach extends past Seaton to Axmouth, with a mixture of large and small pebbles, usually arranged in zones parallel to the shore, the coarser material forming swash-piled berms.

At Axmouth eastward drifting of shingle has built a spit that deflects the Axe River mouth, a breakwater preventing further deflection. Under the Axmouth cliffs the beach is long and sinuous, with flint shingle which coarsens eastward and becomes higher before ending against the heaps of broken Upper Greensand on the shore near Culverhole Point.

Much of the shore between Axmouth and Lyme Regis is dominated by bouldery shores beneath the tumbled formations of coastal landslides, but at Charton there is another laterally graded shingle beach. The western part is a low beach of sand with granules and small pebbles of brown flints, and to the east this becomes higher, consisting of large grey pebbles and cobbles. In the middle of the beach there are often up to six storm-piled berms of relatively coarse shingle, and beach cusps with intervening sandy hollows. The beach comes to an end at Humble Point, where the shore consists of limestone ledges and fallen boulders.

Farther east the slumping clay cliffs at Pinhay are fronted by a gravelly beach with many subangular flint and chert nodules eroded from fans of debris, including gravel and boulders as well as clay, that have spilled down the cliffs. There is also sand from the Upper Greensand (Foxmould) washed down the cliff by rivulets.

The gravels include grey limestone cobbles from the White Lias, but these are worn down relatively quickly, and few of them persist in the beach material that moves alongshore to Seven Rock Point. When south-westerly storm waves accompany high tides, shingle is swept round Seven Rock Point. It moves quickly across the Lias ledges, but more slowly over the bouldery sectors, where crevices have to be infilled before further drifting can occur. As a result, the beach is interrupted here (Fig. 4).

The next beach, Monmouth Beach, is at first a mixture of flints and cherts which have arrived from Pinhay Bay, with pebbles of locally-eroded limestone and some brown sand. There is lateral grading to a high beach of larger storm-piled white and grey pebbles towards the harbour breakwater at The Cobb, the beach widening because of interception of coarse material drifting from the west (Fig. 4). Completion of The Cobb breakwater in 1824 halted the supply of shingle to the Lyme Regis seafront, where the beach has gradually diminished, and is now low and sandy behind the harbour, grading into some residual shingle on Town Beach and adjacent to the groyne at Broad Ledge, a limestone platform exposed at low tide.

Beneath Church Cliffs there are 17 groynes, enclosing compartments which retain minor beaches of mainly brown shingle in front of a sea wall. Beyond the wall the beach is sandy in front of blocks of limestone where the cliffs were formerly quarried, but to the east a backshore beach of angular gravel, mainly chert and limestone with some flint, develops and widens towards a promontory of slumped clay. This promontory has acted in the manner of a groyne, intercepting the drifting beach gravel. Between this promontory and a second landslide lobe under Black Ven is another beach, consisting of swash-piled coarse angular and subangular chert and limestone cobbles which have weathered out of the clay matrix as waves trimmed back the margins of the landslide. Festoons of large boulders mark the former limits of the Black Ven landslide lobe.

East of Black Ven, Charmouth beach is at first sandy in front of eroding clay cliffs, then an upper beach of mainly subangular brown and grey shingle develops. This becomes gradually wider towards Charmouth, where there is an increasing proportion of gravel strewn over the sandy foreshore, and in front of the cliffs of Cains Folly a patchy upper beach of pebbles becomes more



Plate 3. Shingle beach east of Charmouth, looking east towards Golden Cap. The pebble ridge, piled up by storm waves, becomes coarser eastwards, ending in a cobble beach under Golden Cap.

continuous, higher and wider. To the east, the proportion of grey cobbles increases relative to the finer brown shingle, and a high well-sorted cobble beach ends alongside a promontory of slumped clay beneath Golden Cap (Plate 3). The beaches of this part of Lyme Bay are the result of eastward drifting of mainly locally-derived material, segregated by sectors of rocky shore, landslide lobes, and a harbour breakwater (Fig. 4). Their sandy component comes mainly from the Upper Greens and capping the local cliffs, notably the soft sands known as the Foxmould, which are washed down to the shore through the slumping cliffs of Black Ven.

Seatown Beach also shows lateral grading (Fig. 5). At its western end the beach gravels are sparse and poorly sorted, interspersed with sandy areas and exposures of the underlying rock. In the middle of the beach brown flint and chert pebbles are arranged in zones of contrasting size parallel to the beach face, and there are often cusps of coarser shingle with intervening arcs of fine shingle or sand. To the east the beach becomes higher and wider as the shingle becomes coarser and better sorted, ending against the bouldery ebb beneath Thorncombe Beacon.

The features of Seatown Beach are repeated at Eype, where the beach is low and sandy to the west, and an upper beach of shingle develops near the stream mouth, coarsening eastwards until it ends against the concrete esplanade and dumped limestone blocks at West Bay. These coastal defence works are fronted by only a low beach of sand and poorly sorted shingle, which ends at the breakwaters of Bridport Harbour.

Before the completion of these breakwaters in 1825, Chesil Beach continued farther west, and may either have been linked to the Eype compartment, or separated from it only by a small promontory that existed seaward from the modern esplanade. Early maps show that the River Brit had an intermittent and varying outlet through the shingle before the first wooden breakwaters were built to form Bridport Harbour in 1742 (Hannah 1986), but it is not known whether shingle used to drift in from the west to be added to Chesil Beach. Completion of the breakwaters established an artificial western end to Chesil Beach, and the westward drifting of small shingle, mentioned previously, has subsequently widened the beach to their east. Presumably, if the breakwaters had not

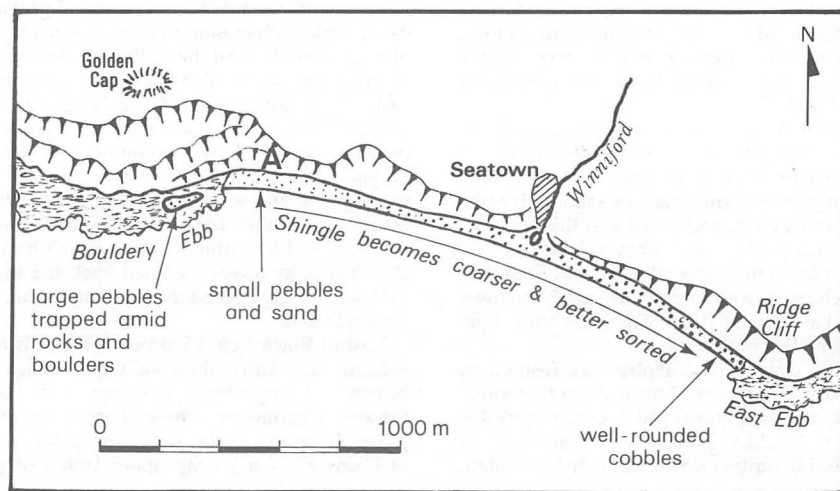


Figure 5. Beach features in the Seatown compartment.



Plate 4. View westward along Seatown Beach towards Golden Cap, showing a variety of pebble sizes in the foreground, the beach becoming lower and finer in texture towards the slumping cliffs to the west.

been built, some of this fine shingle would have occasionally drifted westwards into the Eype compartment. The present distribution of beach material on either side of Bridport Harbour is the outcome of processes at work in the period since the breakwaters were built.

DISCUSSION

This survey has shown that the lateral grading of beach material seen on Chesil Beach is also present on several beaches along the north coast of Lyme Bay. In general the beaches are low and narrow to the west, where the sediment is generally finer, less-well sorted and often accompanied by sandy material, and higher and often wider to the east, where the shingle is coarser and better sorted. This pattern is best developed west of Sidmouth, at Weston Mouth, east of Axmouth, on Monmouth Beach at Lyme Regis, on Charmouth Beach, at Seatown and Eype, as well as on Chesil Beach. It is less well developed at Sidmouth and Seaton, where resort beaches may have been modified by the effects of groynes, and is not found on beaches receiving substantial quantities of locally-derived material, as at Budleigh Salterton and Pinhay. Beer Cove is probably too small for such grading to have developed.

The explanation put forward for lateral grading of Chesil Beach applies with some modification, to these smaller beaches farther west. Eastward drifting of beach material by stronger south-westerly wave action is partly countered by the westward movement of smaller pebbles and sand when gentler waves arrive from the south-east. Chesil Beach shows the lateral grading very clearly because it is a relict formation, no longer receiving new beach material. The other beaches are all, in varying degree, receiving new material either from the erosion of cliffs and foreshores, or as the result of by-passing of intervening rocky and bouldery ebbs. In particular, the white-coated black and grey flint nodules which are derived directly from the Chalk, and become worn to grey cobbles and pebbles, are prominent on the smaller beaches (with the exception of Budleigh compartment, which lies west of the Chalk outcrop), and not on Chesil Beach. They are contrasted with the brown pebbles, granules and coarse sands formed from flints that have had a much longer history of subaerial exposure, their colouration presumably resulting from the oxidation of associated iron compounds. Some of these were weathered during subaerial residence in Pleistocene terraces and cliff-top gravels, or in deposits spread over the sea floor during low sea level phases. They are common on Chesil Beach, and accompany the more recently derived flint nodules on the smaller beaches, especially towards the western ends of beaches that are laterally graded.

Much of the coast of Lyme Bay is cliffed, and recession of cliffs, accompanied by slumping, is proceeding quite rapidly, especially where the beach is low or narrow. Thus in laterally graded beach compartments the cliffs to the west, where the beach is low, and consists of sand and small pebbles, are being eroded more rapidly than those to the east, which are protected by higher beaches of large pebbles and cobbles. Although small quantities of new beach material are generated as cliffs retreat, these have not been sufficient to maintain protective beaches.

Depletion of beaches is evident in several places, especially at Lyme Regis, where completion of The Cobb breakwater cut off the eastward drift of shingle from Monmouth Bay. Elsewhere, notably at Seatown and West Bay, shingle has actually been quarried from the beach: a procedure which seems unwise if cliff erosion is to be minimised (Bird, 1980).

In terms of this discussion, coastal management on the shores of Lyme Bay would benefit from artificial beach nourishment to increase the extent of high and wide beaches which now protect a few sectors from wave attack. Emplacement of relatively coarse material (cobble beaches) would provide the most durable and effective coast protection. Beach nourishment has been carried out on the Bournemouth seafront, and in many other parts of the world (Schwartz and Bird, 1990). On the Black Sea coast of the Georgian Republic (U.S.S.R.), for example, many kilometres of gravelly beaches have been deposited in recent years to halt erosion of cliffs, marshlands and resort areas (Zenkovich and Schwartz, 1987). Such beach nourishment could provide an answer to the problems of erosion at Lyme Regis, in preference to the elaboration of artificial structures such as offshore groynes.

Beach nourishment has the advantage of extending the recreational resource of a seaside resort at the same time as increasing the protection of its seafront. It is widely regarded as an environmentally sympathetic solution to the problem of controlling coastal erosion. The Shambles Shoal, east of Portland Bill, is a possible source of gravelly material suitable for use in the nourishment of beaches on the shores of Lyme Bay.

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Some Effects of Habitat Change on the Dorset Flora

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SUMMARY

Recent studies of habitat change have been used to indicate the reasons why some species of the Dorset flora are less frequent than formerly.

INTRODUCTION

Fifty years ago a comprehensive botanical survey of Dorset was completed. It was the work of Ronald Good, later Professor of Botany at Hull University. Between the years 1931 and 1939 he compiled over 250,000 plant records from almost 7,500 selected sites within what were the county boundaries at that time. He included all possible kinds of plant habitat, and in 1948 the *Geographical Handbook of the Dorset Flora* was published by the Dorset Natural History & Archaeological Society. The book is exceptional among British county floras because not only is there a complete check-list of flowering plants but also an encyclopaedic account of the distribution of the plants in the wild.

Professor Good's unpublished maps and manuscript records were used for a different survey from 1979-1986. The purpose was to find out the extent of habitat change in Dorset after that fifty year period – one of exceptional progress in the countryside. It was possible to re-visit every site where he had recorded plants in the 1930s because each was clearly marked on his 6" OS maps and each plant list had a note on habitat as well as locality. The results of the habitat survey have been published in the Proceedings of the Dorset Natural History & Archaeological Society between 1981 and 1986 and may be summarised as follows: 30% of Good's original sites were totally changed and most of the original flora has disappeared; 15% of the sites were modified in some way so that the flora is less plentiful and some species are absent; in the remaining sites the habitat was much the same, and one would hope to find the plant species which Good listed.

Since Good's original survey, every kind of habitat which he observed in the countryside has been altered: all arable fields and cultivated land; three-quarters of former natural grassland, downs, meadows and hayfields; over half the heathlands with their heath bog and grassy heaths; half the marshes and marshy meadows; about one-third of all deciduous woodland including coppices, mixed woodland and park plantations; and one-third of old walls. Old hedgebanks have been reduced by one-fifth; wet places such as riversides, ponds and ditches have also been reduced by one-fifth, and even at the coast, 6% of maritime sites have been altered to some extent.

Habitat loss means that plants in the wild are less abundant than formerly. The results of the habitat survey confirmed the obvious fact that there are fewer places for wild flowers to grow, especially in arable fields, chalk grassland, dry heathland and marshy meadows. Change of land use from chalk grassland to improved pasture, from old woodland to conifer plantation, or from marshy meadows to well-drained fields results in fundamental changes to the soil structure, and growing conditions are altered so that the original association of plants does not survive.

The main activities which have caused loss of habitat were apparent in the recent survey: ploughing and re-seeding natural grassland; clean cultivation and the extensive use of fertilisers and herbicides; land clearance of thickets, hedges, heathland and bracken; replacing old coppices with conifers or arable crops; neglect of unprofitable places;

dereliction of old woods; the spread of gorse on hillsides; the use of ponds and pits for rubbish and slurry. Other factors were: the increase in carparks, caravan sites, playing fields and golf courses; the expansion of villages and farmsteads; various mineral workings for stone, gravel, clay and oil; road improvements and the loss of road verges, hedges and hedgebanks; the destructive effects of rabbit, deer and grey squirrels; the effects of trampling by cattle in woods, by streams and on hillsides; erosion and landslips, both inland and coastal; the spread of invasive plants such as *Rhododendron ponticum* in woods and on heathland, Scots pine on heathland, and gorse (*Ulex europaeus*) on chalk hills.

The plants most likely to be affected adversely by these far-reaching changes in the countryside are those which have become isolated in small areas as a result of fragmentation of their habitats, such as heathland and deciduous woodland. Particularly vulnerable are the rare plants on the edge of their geographical range and susceptible to climatic variations as well as disturbance to their environment. Examples are Common Butterwort, (*Pinguicula vulgaris*) and Grass-of-Parnassus (*Parnassia palustris*) which are suited to wetter, cooler conditions, and the seashore Cottonweed, (*Otanthus maritimus*) which is a plant of warmer places. They no longer occur in Dorset.

Additional plants which may now be extinct in the wild in Dorset are: Asarabacca (*Asarum europaeum*), Wild Liquorice (*Astragalus glycyphyllos*), Thorow-wax (*Bupleurum rotundifolium*), Slender Hare's-ear (*Bupleurum tenuissimum*), Starved Wood Sedge (*Carex depauperata*), Narrow-leaved Helleborine (*Cephalanthera longifolia*), Purple Spurge (*Euphorbia peplis*), Fritillary (*Fritillaria meleagris*), Blue Iris (*Iris spuria*), Fine-leaved Sandwort (*Minuartia hybrida*), Oxtongue Broomrape (*Orobancha picridis*), Yarrow Broomrape (*Orobancha purpurea*), Greater Broomrape (*Orobancha rapum-genistae*), Greater Burnet Saxifrage (*Pimpinella major*), Round-headed Rampon (*Phyteuma tenerum*), Annual Beard-grass (*Polypogon monspeliensis*), Cut-leaved Selfheal (*Prunella lacinata*), Small Fleabane (*Pulicaria vulgaris*), Greater Spearwort (*Ranunculus lingua*), Greater Water-parsnip (*Sium latifolium*), Marsh Stitchwort (*Stellaria palustris*), Ivy-leaved Bellflower (*Wahlenbergia hederacea*).

Juniper (*Juniperus communis*) continues to decline; apparently only one bush survives on the chalk downs in the north-east of the county. None of the other plants has been seen in recent years in the localities where they were once recorded. Several new records apply to plants which have been introduced intentionally or by chance, or beyond the former Dorset boundaries.

In spite of these losses, nearly all the 1300 plants described by Professor Good in the *Geographical Handbook* may still be found in Dorset. Mostly uncommon or local species have been chosen for this discussion because these plants are especially vulnerable to habitat change, and their numbers are reduced whenever their particular habitat is destroyed. There are plants representative of wet places, marshes and marshy meadows, coastal habitats, heathland, grassland, hedgebanks, woodland, arable land

and other habitats, and there is a note on new habitats and introduced plants. The scientific names conform as far as possible with Clapham, Tutin & Warburg (1981); the English names are those in common use.

PLANTS OF WET PLACES

These are the plants which grow in or around ponds and lakes, streams and rivers, ditches and dykes, reed swamps and other permanently wet places. Ponds have been especially affected by habitat change. Many former dewponds have been filled in and ploughed over; others have silted up and become overgrown with willows; and some have been incorporated into fish farms. A few ponds have been colonised by the invasive weed, Water Stonecrop (*Crassula helmsii*), a native of Australia which was first recorded in 1962 in Ferndown, then a part of Hampshire, and elsewhere in Dorset from 1980.

Riversides have also been affected, and in many places riverbank vegetation has been destroyed by grazing to the water's edge, although the aquatic flora of the main waterways of the Rivers Stour, Frome and Piddle is probably as abundant as it was fifty years ago, and not permanently affected by periodic dredging and cleaning activities. In contrast, many ditches and drainage channels of old water meadows have been filled in or else deepened and realigned, and these changes may account for the apparent loss of plants such as Greater Burnet-Saxifrage (*Pimpinella major*), Greater Spearwort Buttercup (*Ranunculus lingua*), Greater Water-parsnip (*Sium latifolium*) and Marsh Stitchwort (*Stellaria palustris*). Greater Spearwort is also known to be eaten by roe deer, and probably by cattle.

Plants which have declined because of loss of various aquatic habitats include Narrow-leaved Water-plantain (*Alisma lanceolatum*), Lesser Water-plantain (*Baldellia ranunculoides*), the sedges *Carex acuta* and *C. vesicaria*, Mare's-tail (*Hippuris vulgaris*) Water Purslane (*Peplis portula*) and Lesser Bulrush (*Typha angustifolia*), together with all the less common species of Duckweed (*Lemna* spp.), Water-milfoil (*Myriophyllum* spp.), Water Dropwort (*Oenanthe* spp.), some Pondweeds (*Potamogeton* spp.) and Water Crowfoot (*Ranunculus* spp.). In addition, some of the plants once associated with Studland at Little Sea and The Moors at Arne are rarely seen: these include *Eleocharis parvula*, *Isoetes echinata* and *Littorella uniflora*, *Carex diandra*, *Cladium mariscus* and *Sparganium minimum*. The rare Marsh Fern (*Thelypteris palustris*) is restricted to fewer sites, and Pillwort (*Pilularia globulifera*) is also rarely seen, a notable exception being in the dry summer of 1989, when it was found in the muddy margins of heathland pools, as was *Littorella*.

In contrast, the rare waterside plants Flowering Bulrush (*Butomus umbellatum*), Spring Snowflake (*Leucojum vernum*) and Summer Snowflake (*Leucojum aestivum*) still occur in those places where they were previously recorded, and many locally common plants are to be found abundantly along ditches and rivers, their range increased by the dredging machines designed to clear them away. As well as a host of grasses, rushes, reeds and sedges, they include the commoner species of Water-plantain (*Alisma*), Water-parsnip (*Berula*), Horsetail (*Equisetum*), Purple Loosestrife (*Lythrum*), Yellow Loosestrife (*Lysimachia*), Water-dropwort (*Oenanthe*), Arrowhead (*Sagittaria*), Bur-reed (*Sparganium*) Meadow-rue (*Thalictrum*), Reedmace (*Typha*) and Speedwell (*Veronica*). They are vulnerable only to exceptional changes in their environment.

PLANTS OF MARSHES AND MARSHY MEADOWS

Habitat change in damp and marshy places has been brought about by extensive land drainage and the establishment of permanent, reseeded pastures. Only half the marsh and wet meadow sites of Good's 1930s' survey remains. Changes in land-use mean that Fritillary (*Fritillaria meleagris*) no longer grows in the wild in Dorset, and other plants of wet places may possibly have become extinct, among them being Brown Galingale (*Cyperus fuscus*), Cut-grass (*Leersia oryzoides*) and Penny-royal (*Mentha pulegium*).

Other rarities now restricted to fewer localities because of habitat change are Bulbous Foxtail (*Alopecurus bulbosus*), Lesser Marshwort (*Apium inundatum*), Bladder-sedge (*Carex vesicaria*), Whorled Caraway (*Carum verticillatum*), Mousetail (*Myosurus minimus*), Narrow-leaved Water-dropwort (*Oenanthe silaifolia*), Common Bistort (*Polygonum bistorta*), Small Water-pepper (*Polygonum mite*), Great Burnet (*Sanguisorba officinalis*), Viper's-grass (*Scorzonera humilis*), Least Bur-reed (*Sparganium minimum*). Flat Sedge (*Blysmus compressus*), always rare, still grows near Bere

Regis but apparently not elsewhere. Several uncommon marsh plants are also less abundant: in West Dorset, Alternate-leaved Golden-saxifrage (*Chrysopenium alternifolium*), Wood Horsetail (*Equisetum sylvaticum*), Marsh Violet (*Viola palustris*); and elsewhere, Marsh Helleborine (*Epipactis palustris*), Water Avens (*Geum rivale*), Tubular Water-dropwort (*Oenanthe fistulosa*), Lesser-butterfly Orchid (*Platanthera bifolia*), Marsh Cinquefoil (*Potentilla palustris*), Marsh Arrowgrass (*Triglochin palustris*), Yellowcress (*Rorippa* spp.) and Marsh Valerian (*Valeriana dioica*).

Even common plants are noticeably restricted to the remaining damp places where land drainage is neither practicable nor profitable – plants such as Marsh Marigold, Meadow Thistle, Meadow Rue, Cuckoo Flower, Lesser Spearwort, Yellow Loosestrife, Purple Loosestrife, Sneezewort, Pepper Saxifrage, Ragged Robin and many others.

PLANTS OF COASTAL HABITATS

Maritime plants are plentiful along most of the shores and cliffs of the Dorset coast. Habitat change has had less impact on the coastal flora than elsewhere. Most obvious exceptions are around Portland, Weymouth and Poole, where there have been extensive developments of roads and buildings, and other parts of the coast, where carparks, caravan sites, new roads and paths have proliferated. Other changes have been caused by landslip and soil erosion, especially in West Dorset, and by the decline in the rabbit population after 1960, which favoured the spread of Tor-grass (*Brachypodium pinnatum*) at the expense of short turf. Seasonal changes along the Chesil Beach affect the distribution and abundance of plants such as Sea Pea (*Lathyrus japonicus*), Horned Poppy (*Glaucium flavum*) and Sea Kale (*Crambe maritima*). *Crambe* is more plentiful now that it is no longer collected for market. Marsh Mallow (*Althaea officinalis*) is still well established in two or three places on the shores of the Fleet, but to the west Sea Holly (*Eryngium maritimum*) seems to be declining, and to the east much of the Small Mouth flora has disappeared and Four-leaved Allseed (*Polycarpon tetraphyllum*) is rarely seen.

Sea Wormwood (*Artemisia maritima*) is apparently extinct from its former site on the shores of Poole Harbour, and Shrubby Sea-blite (*Suaeda fruticosa*) is less frequent here though locally very plentiful along the inner shore of the Chesil Beach. The species which comprise the vegetation of Poole Harbour are much the same as fifty years ago in spite of shifting mud and tidal effects and the debris of war, though these factors, together with the expansion and retreat of Cordgrass (*Spartina anglica*), have constantly altered the distribution of the plants of the muddy shores. Uncommon grasses, rushes and sedges such as *Parapholis strigosa*, *Juncus tenuis* and *Carex punctata* may still be found, as well as species of Eelgrass (*Zostera*) and Tasselweed (*Ruppia*), plants which also occur in the brackish water of the Fleet. At Studland, Sea Bindweed (*Calystegia soldenella*) is now very uncommon among the much-frequented dunes, and former plants of the South Haven Peninsula, Annual Beard-grass (*Polygomon monspeliensis*) and Spring Vetch (*Vicia lathyroides*) have not been seen for some years.

Plants of dry, coastal grassland and carparks and tracks are probably more at risk than previously. These include the very local Stinking Goosefoot (*Chenopodium vulvaria*) west of Bridport, small plants like Bulbous Meadow-grass (*Poa bulbosa*), Upright Chickweed (*Moenchia erecta*), Sea Pearlwort (*Sagina maritima*) and a number of legume species from several different localities: Hairy Bird's-foot-trefoil (*Lotus hispidus*), Narrow-leaved Bird's-foot-trefoil (*Lotus tenuis*), Toothed Medick (*Medicago polymorpha*), Rough Clover (*Trifolium scabrum*), Sea Clover (*Trifolium squamosum*), Knotted Clover (*Trifolium strictum*), Subterranean Clover (*Trifolium subterraneum*) and Spring Vetch (*Vicia lathyroides*).

Rather local plants of sandy beaches are grass-leaved Orache (*Atriplex littoralis*), Sand Sedge (*Carex arenaria*), Sea Sandwort (*Honkenya peploides*), Saltwort (*Salsola kali*), and only rarely Sea Spurge (*Euphorbia paralias*). Other uncommon plants of grassy places and undercliffs, and restricted to very few localities, are Bulbous Foxtail (*Alopecurus bulbosus*), Divided Sedge (*Carex divisa*), Slender Centaury (*Centaureum tenuifolium*) with white flowers, Nit-grass (*Gastridium ventricosum*), Yellow Vetchling (*Lathyrus aphaca*), Bithynian Vetch (*Vicia bithynica*), Yellow-vetch (*Vicia lutea*) and Slender Tare (*Vicia tenuissima*).

Cliff-top plants often include Wild Cabbage (*Brassica oleracea*) and Slender Thistle (*Carduus tenuiflorus*) and occasionally Milk Thistle (*Silybum marianum*) and Cotton Thistle (*Onopordum acanthium*). Less common are Sea Stork's-bill (*Erodium maritimum*) and Nottingham Catchfly (*Silene nutans*), which also occur

in the very mixed vegetation of undercliffs. Depending on the locality the Dorset undercliffs include marshes, thickets, grassland, bare soil and rocks, and where landslips are frequent there is constant habitat change. Some plants are associated only with the limestone sea-cliffs of Purbeck and Portland: Sea Spleenwort (*Asplenium marinum*), Rock Samphire (*Crithmum maritimum*), Portland Spurge (*Euphorbia portlandica*), Golden-samphire (*Inula crithmoides*), and on Portland only Maidenhair Fern (*Adiantum capillus-veneris*), 'Portland' Hawkweed (*Hieracium 'leyanum'*), Sea-lavender (*Limonium recurvum*), Hoary Stock (*Matthiola incana*) and Rock Stonecrop (*Sedum forsterianum*).

Also there are plants which are not only coastal species but usually occur near the coast in a variety of places, for example Marsh Mallow (*Althaea officinalis*), Wormwood (*Artemisia absinthum*), Italian Lord's-and-Ladies (*Arum italicum*), Little-Robin (*Geranium purpureum*), Pale St. John's-wort (*Hypericum montanum*), Henbane (*Hyoscyamus niger*), Tree-mallow (*Lavatera arborea*), Early Spider-orchid (*Ophrys sphegodes*) and Golden Dock (*Rumex maritimum*).

These plants, too, are restricted to very few localities, where they are especially vulnerable to habitat change.

HEATHLAND PLANTS

The fragmentation and permanent loss of heathland has increased in the past fifty years. Heaths have been used for agriculture, conifer plantations, roads and buildings, mining and oil drilling, and for military activities. The extent of change is greater than at any other time and the heathland flora is now much restricted. Most heathland occurs in the south-east of the county to the Hampshire border, but all small heathy places as far as Champfern-hayes in west Dorset have been reduced, particularly at Powerstock, Hooke, Black Down, Stonebarrow Down, Abbotsbury Castle, and the hilltops around the Marshwood Vale.

Boggy heathland has sometimes been drained but most of the losses have been from the drier heaths, reducing the abundance of Broom, Gorse (three species), Heather (four species) and other conspicuous and common plants, as well as the small and often rare plants of heath tracks and damp, sandy places, including Chaffweed (*Anagallis minima*), Yellow Centaury (*Cicendia filiformis*), Mossy Stonecrop (*Crassula tillaea*), Slender Cudweed (*Filago minima*), Common Cudweed (*Filago vulgaris*), Marsh Clubmoss (*Lycopodiella inundatum*), Allseed (*Radiola linoides*), Heath Dog-violet (*Viola canina*) and Pale Dog-violet (*Viola lactea*). Very uncommon plants of grassy heaths in Dorset include Bog Hair-grass (*Deschampsia setacea*), Heath Lobelia (*Lobelia urens*), Lesser Butterfly-orchid (*Platanthera bifolia*) and Hoary Cinquefoil (*Potentilla argentea*). Locally frequent are Bristle Bent (*Agrostis curtisii*), Heath Spotted-orchid (*Dactylorhiza maculata*), Petty Whin (*Genista anglica*), Heath Cudweed (*Gnaphalium sylvaticum*), Smooth Cat's-ear (*Hypochoeris glabra*) and Yellow Bartsia (*Parentucellia viscosa*), as well as Climbing Corydalis (*Corydalis claviculata*) and Bilberry (*Vaccinium myrtillus*), which occur more to the west of the county.

Other uncommon plants occur in damp and boggy heaths in Dorset. All the sundews, including *Drosera anglica*, are present, as well as the Marsh Gentian (*Gentiana pneumonanthe*), Dorset Heath (*Erica ciliaris*) and its hybrids, various marsh orchids such as *Dactylorhiza incarnata* and *D. praetermissa* and hybrids, and Bog Orchid (*Hammabya paludosa*) in *Sphagnum* moss, together with Pale Butterwort (*Pinguicula lusitanica*) and Bog Pimpernel (*Anagallis tenella*). All four British species of Bladderwort (*Utricularia* spp.) may be found in heathland streams and pools, and Pillwort (*Pilularia globulifera*) has been seen again in 1989. The Cyperaceae family is well represented and includes both Beaked Sedges (*Rhynchospora* spp.), four species of Cotton Grass (*Eriophorum* spp.), of which only *E. angustifolium* is common, six Spike-rush species (*Eleocharis* spp.) and many sedges (*Carex* spp.).

Ivy-leaved Bellflower (*Wahlenbergia hederacea*) no longer grows in the few places where it was recorded in the 1930s because of habitat change and it is now considered extinct in the county. All heathland plants are especially sensitive to changes in their environment and some of the above examples will disappear in Dorset if their particular habitats were to be destroyed.

PLANTS IN GRASSLAND

Natural grassland used to be the main type of vegetation in the country. Traditional farming had little permanent influence on the grassland flowers, which were accepted as an integral and sometimes useful part of the countryside. Extensive grassland improve-

ment was rarely possible in the 1930s and the various types – chalk pastures, water meadows, hay meadows, parkland, road verges, grassy banks and rough grazing with thickets, bracken or heath – remained little changed from one year to the next.

Most natural grassland has now changed out of all recognition, having been extensively ploughed, chemically treated and used for high-yield crop production and improved permanent pasture. The successes and benefits of modern agriculture are well known. At the same time, the abundance of grassland flowers has been greatly reduced and their occurrence restricted to old trackways and archaeological sites, hillsides too steep to plough, roadsides and hedgebanks, and conservation areas, both coastal and inland.

Other changes have contributed to the loss of old grassland: land drainage, new roads and road improvements, expansion of villages, quarrying, tree planting, the spread of Gorse or thorn thickets on steep hill sides, the fluctuations in the rabbit population, over-grazing in rough pastures. Thus inevitably many species are much less common than formerly. Two species are now extinct: Blue Iris (*Iris spuria*), which once grew in a south Dorset meadow, and Fritillary (*Fritillaria meleagris*), which was last recorded in the wild in the Blackmore Vale.

Plants of chalk downland are especially vulnerable, notably the orchids Frog Orchid (*Coeloglossum viride*), Musk Orchid (*Herminium viride*) and Burnt-tip Orchid (*Orchis ustulata*), as well as other rarities like the Early Gentian (*Gentianella anglica*) and Field Fleawort (*Senecio integrifolius*). Others, less rare but now mostly restricted to conservation areas, include Basil Thyme (*Acinos arvensis*), Clustered Bellflower (*Campanula glomerata*), Early Spider Orchid (*Ophrys sphegodes*), Knapweed Broomrape (*Orobanche elatior*), Green-winged Orchid (*Orchis morio*), Small-flowered Buttercup (*Ranunculus parviflorus*), Large Thyme (*Thymus pulegioides*), Knotted Hedge-parsley (*Torilis nodosa*) and Bastard Toadflax (*Thesium humifusum*).

On medium and sourer soils there is a number of very uncommon plants which may be locally abundant. These include Meadow Saffron (*Colchicum autumnale*) (also in woods), Field Gentian (*Gentianella campestris*), now rarely seen, Long-stalked Crane's-bill (*Geranium columbinum*), Dyer's Greenweed (*Genista tinctoria*), Meadow Saxifrage (*Saxifraga granulata*) (also on chalk soils), Lady's-mantle (*Alchemilla filicaulis*), Spiny Restharrow (*Ononis spinosa*), Adder's-tongue Fern (*Ophioglossum vulgatum*), Pepper-saxifrage (*Silaum silaus*) and Zigzag Clover (*Trifolium medium*).

Some of the many grassland plants along the coast have already been mentioned: those which grow on clifftops where erosion occurs will eventually disappear and not be replaced because they are already absent from the arable fields and improved pastures adjacent to the edges of the cliffs. Most plants in all types of former natural grassland, inland as well as near the coast, are now less widespread, and even common species such as Spotted Orchid (*Dactylorhiza fuchsii*), Dropwort (*Filipendula vulgaris*) and Cowslip (*Primula veris*) have gone permanently from many old localities.

HEDGE BANK PLANTS

Hedgebanks can provide alternative habitats for the flora of woodland, grassland, marshes and arable land. Plants such as Wood Anemone (*Anemone nemorosa*), Yellow Archangel (*Lamium galeobdolon*), Dog's Mercury (*Mercurialis perennis*) and Goldilocks Buttercup (*Ranunculus auricomus*) usually indicate that the hedge was a wood boundary, even though the wood was cleared long ago. Hedgebanks by ancient trackways, former drove roads, such as Mutton Street and Zoar Lane, as well as old estate and parish boundaries, are among the richest botanical sites within the county. The older the hedge, the greater the variety of shrubs: they include Wayfaring-tree (*Viburnum lantana*), Buckthorn (*Rhamnus catharticus*), Dogwood (*Cornus sanguinea*) and Spindle (*Euonymus europaeus*) on chalky soils, together with White Bryony (*Bryonia dioica*), Hops (*Humulus lupulus*), Traveller's-joy (*Clematis vitalba*) and wild roses, whilst on acid soils Alder Buckthorn (*Frangula alnus*) is not uncommon. A rare tree of old hedges in several localities is the Wild Service Tree (*Sorbus torminalis*), but Small-leaved Lime (*Tilia cordata*) has been recorded only inside a few woods.

Hedgerows of recent origin and established as field boundaries using one or very few shrub species have only a limited botanical interest because the associated flora is also recent. Many such hedges have been grubbed out to increase the size of fields and to reduce maintenance, but ancient hedgebanks, which are a familiar feature of the Dorset landscape, have survived in most parts of the county. They have not, however, gone unchanged and continue to

be affected in many ways: road maintenance and the methods of cutting back both hedge and banks, trampling by cattle, neglect and heavy shading, growth of nettles and other rank vegetation (often in response to fertilisers seeping from nearby land), changes in land-use in adjacent fields and occasional use of weed-killers. Any of these factors reduces the plant life and may eventually change the composition of the flora and eliminate rare species, and the loss of hedgebanks around old woods leads to the decline of woodland plants.

A number of plants are more commonly found by hedges than elsewhere: in north-east Dorset, Dark Mullein (*Verbascum nigrum*); in north Dorset, Elecampane (*Inula helenium*); on chalky soils, the Sweet Violet (*Viola odorata*); and elsewhere Spurge Laurel (*Daphne laureola*), Crow Garlic (*Allium vineale*) and Greater Chickweed (*Stellaria neglecta*). Several others may be extending their range: Fragrant Agrimony (*Agrimonia odorata*), Large Bindweed (*Calystegia sylvatica*), Hedgerow Crane's-bill (*Geranium pyrenaicum*) and Alexanders (*Smyrniolum olusatrum*).

Very uncommon plants found only at a few hedgebank sites are Small Teasel (*Dipsacus pilosus*), Pale Willowherb (*Epilobium roseum*), Imperforate St. John's-wort (*Hypericum maculatum*), Field Cromwell (*Buglossoides arvensis*), Spiny Restharrow (*Ononis spinosa*), Wild Tulip (*Tulipa sylvestris*) and Narrow-leaved Lungwort (*Pulmonaria longifolia*) (also in woods). Such plants are especially vulnerable when there is road maintenance, hedge-trimming and cutting of roadside verges.

WOODLAND PLANTS

Traditional woodland in Dorset was coppice-with-standards where Hazel grew beneath a canopy of well-spaced Oak trees and the woods were managed for centuries to provide a succession of valuable products. Such woods and coppices have a rich variety of other trees, shrubs and ground flora. Somewhat different are the deciduous and mixed plantations, estate shelter belts, and woods on wet soils; no two woods are alike and the flora depends not only on the soil but also upon the history and management. In conifer plantations the flora is very limited, and often absent altogether.

At the time of the *Domesday Survey* (1086), about 13% of the Dorset countryside was woodland: today the area is 3%, but this does not include the conifer and other plantations which cover a further 6% of the county. The relatively small area of apparently ancient woodland is the result of the demands for more agricultural land down the centuries, but after 1900 there were other pressures on ancient woodlands. Rural communities no longer required a continuous supply of wood products and many old woodlands and coppices were clear-felled, especially during the two World Wars, or were neglected as they became uneconomic.

Changes in woodland management have profound effects on woodland plants. Neglected coppices result in heavy shading and the ground flora consequently becomes reduced. If derelict Hazel fails to regenerate and is finally destroyed by cattle or deer, open woodland with grasses may develop in place of the original flora, and wherever *Rhododendron ponticum* (which was introduced into Dorset woods in the 19th century) has become established, the ground flora, and eventually all other shrubs, are shaded out.

Undoubtedly, the greatest impact on woodland since the 1930s has been the planting of conifers and mixed plantations on uneconomic sites, and these changes accelerated after 1945 with the increased mechanisation associated with clearing, draining and planting as well as the use of herbicides. Even if plants or their seeds survive the initial re-planting, they may eventually succumb to subsequent shading and increased acidification of the soil; as a result, seed reserves may be lost permanently. Some plants survive along the rides and trackways through new plantations, and include uncommon species such as White Helleborine (*Cephalanthera damasonium*), Butterfly Orchid (*Platanthera chlorantha*), Narrow-leaved Lungwort (*Pulmonaria longifolia*), Wood Vetch (*Vicia sylvatica*) and Sedges such as *Carex laevigata*, *C. pallascens* and *C. strigosa*, as well as familiar plants of ancient woodland such as the Wood-rushes, Woodruff, Wood Sorrel and Bluebell. But these and many others have declined in the dense shade of conifers like Douglas Fir, Norway Spruce and Western Hemlock, where successful seed germination is improbable.

These are some of the Dorset woods or wooded areas which can be seen on Isaac Taylor's 1765 map and whose flora diminished following the planting of conifers in the past few decades: Broadley (Bryanston), Cerne Great Wood, Daggons, Delcombe, Duncliffe, Durweston, Hooke Park, Middlemarsh, Milton Abbas, Punc-knowle, Whatcombe, Whitfield, as well as parts of Batcombe, Burwood, Chetterwood, Clifton, Cranborne, Cranborne Chase, East

Lulworth, Edmondsham, Holt Forest, Ilsington, Turnworth, Wimborne St. Giles, and woods near Marsh Caundle.

Furthermore, woods have continued to be grubbed out to provide agricultural land, leaving no trace except a name on an old map or a ghost wood along a field boundary. The largest of these was Houghton Wood near Winterbourne Houghton. Others were Alton Common Wood near Buckland Newton and Swillets Wood near Seaborough. Many have been reduced in size, such as Short Wood and Humber Woods near Bishop's Caundle, Ashley Wood near Blandford, Ilsington Woods near Tincton and Mannington near Wimborne.

All these changes mean that woodland plants are less abundant and more isolated, and rare plants are rarer. Examples are Columbine (*Aquilegia vulgaris*), Stinking Hellebore (*Helleborus foetidus*), Southern Wood-rush (*Luzula forsteri*), Bastard Balm (*Melittis melissophyllum*), Fly Orchid (*Ophrys insectifera*) and Solomon's-seal (*Polygonatum multiflorum*) from Cranborne Chase; Alternate-leaved Golden-saxifrage (*Chrysosplenium alternifolium*) from west Dorset; Long-leaved Lungwort (*Pulmonaria longifolia*) from Purbeck and south-east Dorset, and Yellow Star-of-Bethlehem (*Gagea lutea*) in a few central areas.

Other woodland plants, widespread but uncommon, are: Meadow Saffron (*Colchicum autumnale*) (also in meadows), Small Teasel (*Dipsacus pilosus*) (also in hedgebanks), Wood Horsetail (*Equisetum sylvaticum*) (in a few wet woods), Toothwort (*Lathraea squamaria*) (only on old Hazel stools), Narrow-leaved Everlasting-pea (*Lathyrus sylvestris*) (near the coast), Bird's-nest Orchid (*Neotia nidus-avis*), Yellow Bird's-nest (*Monotropa hypopitys*), Herb Paris (*Paris quadrifolia*), Wood Meadow-grass (*Poa nemoralis*), Wood Club-rush (*Scirpus sylvaticus*) and Orpine (*Sedum telephium*), and the orchids *Epipactis helleborine*, *E. leptochila*, *E. phyllanthes*. Woodland trees which occur only in a few places are Common Whitebeam (*Sorbus aria*), Wild Service-tree (*Sorbus torminalis*) and Small-leaved Lime (*Tilia cordata*).

Wherever ancient woodland continues to be managed in traditional ways and coppiced at intervals, familiar plants may still be found abundantly in springtime and early summer: Wood Anemone, Wood Melick, Wood Millet, Wood Sanicle, Wood Speedwell, Wood Spurge, Woodruff, Wood Sorrel and Bluebell – all useful indicators of an ancient woodland site, as well as Moschatel, Primrose, Violets, Early Purple Orchid, Yellow Pimpernel, Bitter-vetch and others.

PLANTS OF ARABLE LAND

Clean cultivation by repeated applications of herbicides have all but eliminated the 'weeds' of arable land from cultivated fields. A few may appear after the growing crop has been harvested; others survive on field borders beyond the range of weedkillers, and several, such as Black-grass (*Alopecurus myosuroides*), Common Couch (*Agropyron repens*), Creeping Thistle (*Cirsium arvense*) and the various Mayweeds are exceptionally persistent. In recent years, arable weeds are more commonly found in alternative habitats: newly-made roadsides, building sites, gardens, fruit farms and disturbed ground.

Inevitably, some cornfield plants are now extinct in Dorset except as deliberate introductions, Corn Cockle (*Agrostemma githago*) and Cornflower (*Centaurea cyanus*) being notable among these. Others are rarely seen: Pheasant's-eye (*Adonis annua*), Thorow-wax (*Bupleurum rotundifolium*), Broad-leaved Spurge (*Euphorbia platyphyllos*), Corn Cleavers (*Galium tricornutum*), Field Cromwell (*Lithospermum arvense*), Corn Buttercup (*Ranunculus arvensis*), Green Field-speedwell (*Veronica agrestis*) and Heart-sease, or Wild Pansy, (*Viola tricolor*). Several plants are restricted to cultivated land on acid soils: Small-flowered Crane's-bill (*Geranium pusillum*), Lesser Snapdragon (*Misopates orontium*), Dwarf Mallow (*Malva neglecta*), Hairy Buttercup (*Ranunculus sardous*), Small-flowered Catchfly (*Silene gallica*) and Corn Marigold (*Chrysanthemum segetum*), which is sometimes locally very abundant. Mousetail (*Myosurus minimus*), which used to be described as a cornfield weed, now occurs only in a few places where the ground is open and the soil damp and sandy. Mousetail has survived in roughly the same area near Wareham noted by Mansel-Pleydell one hundred years ago.

Another group of plants is associated with more chalky soils, particularly on field edges, both inland and along the Purbeck and Portland coasts: Basil-thyme (*Acinos arvensis*), Dwarf Spurge (*Euphorbia exigua*), Longleaf (*Falcaria vulgaris*), Sharp-leaved Fluellen (*Kickxia elatine*), Round-leaved Fluellen (*Kickxia spuria*), Venus's-looking-glass (*Legousia hybrida*), Long-headed Poppy (*Papaver dubium*), Rough poppy (*Papaver hybridum*), Shepherd's-

needle (*Scandix pecten-veneris*) and Corn Salad (*Valerianella* spp.), but several of these are very infrequent.

Some of these species were always uncommon, but as a result of changes in agriculture all are increasingly scarce. However, the reappearance in 1989 of many of these in 'set-aside' or fallow fields is very encouraging.

PLANTS OF OTHER HABITATS

There are other plant habitats in addition to the hedgebanks, woods, heaths, marshes, grassland, fields, rivers and coastal sites already described. A small group of plants successfully colonises the old walls of farms, cottages, churchyards, bridges and other suitable places around the county. Inevitably some walls have been replaced, but many plants are also lost when stonework is restored and cleaned or sprayed with herbicides. Rarities such as Wall Whitlowgrass (*Draba muralis*) and Hairy-fruited Cornsalad (*Valerianella eriocarpa*) may have gone from the walls where they were previously recorded, but commoner species are still to be seen. They include Thale Cress (*Arabidopsis thaliana*), Ivy-leaved Toadflax (*Cymbalaria muralis*), Common Whitlowgrass (*Erophila verna*), Fern-grass (*Desmazaria rigida*), Shining Crane's-bill (*Geranium lucidum*), Pellitory-of-the-wall (*Parietaria judaica*), Rue-leaved Saxifrage (*Saxifraga tridactylites*), Biting Stonecrop (*Sedum acre*), Navelwort (*Umbilicus rupestris*) as well as the ferns Black Spleenwort (*Asplenium adiantum-nigrum*), Wall-rue (*A. ruta muraria*), Maiden-hair Spleenwort (*A. trichomanes*) and Rustyback (*Ceterach officinarum*). Long-established introductions such as Clove Pink, Wallflower and Hoary Stock still occur on ancient walls or cliffs, and it is possible that the Stock (*Matthiola incana*), on Portland is a native plant.

Thickets are associated with rough grassland, heaths, bracken, scrub or woodland, and as well as Hawthorn, Blackthorn or Gorse may include many climbing plants and ramblers and often a variety of tall herbaceous plants. Most thickets on agricultural land have been cleared; a small number on difficult land have developed into Oak or Ash woodland. Today, thickets remain only in nature reserves, along water courses, on poor soils and steep hillsides, and especially near the coast, where many grassland, maritime and marsh plants may also be found. New thickets can develop rapidly where land is not managed, notably *Rhododendron ponticum* in deciduous woods and on heaths, Pine and Birch also on heaths, and thorn trees and Gorse on most soils, to the detriment of the ground flora.

Railways have always had an unusual flora on their tracks and banks, and stretches of old railway not overgrown or redeveloped are excellent habitats. Some of the railway plants from a few places in south Dorset are: Common Calamint (*Calamintha ascendens*), Small Toadflax (*Chaenorhynchus minus*), Little-Robin (*Geranium purpureum*), Round-leaved Crane's-bill (*Geranium rotundifolium*), Pale St. John's-wort (*Hypericum montanum*), Hawkweed (*Hieracium maculatum*), Purple Toadflax (*Linaria purpurea*), Pale Toadflax (*Linaria repens*), Prickly Lettuce (*Lactuca serriola*) and Oxford Ragwort (*Senecio squalidus*). All except the ragwort are uncommon elsewhere.

Disused quarries as well as chalk pits, marl pits, clayworkings, old brickworks, and other former industrial sites are also well-colonised by interesting plants. However, these places are vulnerable to change and may be used as dumps, building land or converted into marginal agricultural land. Deadly Nightshade (*Atropa belladonna*) no longer grows on ancient chalk banks, and many chalk downland plants are buried when old chalk pits are filled in. The only recent records for the Jersey Cudweed (*Gnaphalium luteoalbum*) and the Common Cudweed (*Filago vulgaris*) are from sites of industrial waste. Old clay pools and former clay pits on heathland are now protected in nature reserves, but modern, large-scale clay workings are unlikely to produce comparable plant habitats because they are restored for other land-use.

INTRODUCED PLANTS

Plants which are not native in the county and have been introduced by chance or intentionally may be found in all kinds of habitat. Some of the weed colonists of arable land first arrived with early agriculturalists thousands of years ago. Other long-established introductions, sometimes called denizens, have at different times become naturalised in the wild and some still occur in a few places. Interesting examples are Monkshood (*Aconitum napellus*), Wild Leek (*Allium ampeloprasum* var. *babingtonii*), Wormwood (*Artemisia absinthum*), Deadly Nightshade (*Atropa belladonna*), Leopard's-bane (*Doronicum pardalianches*), Dame's-violet (*Hesperis matronalis*), Elecampane (*Inula helenium*), Tuberous Pea

(*Lathyrus tuberosus*), Spring Snowflake (*Leucojum vernum*), Monkeyflower (*Mimulus guttatus*), Pink Purslane (*Montia sibirica*), Sainfoin (*Onobrychis sativa*), Star-of-Bethlehem (*Ornithogalum umbellatum*), Opium Poppy (*Papaver somniferum*), Dwarf Elder (*Sambucus ebulus*), Soapwort (*Saponaria officinalis*), Milk Thistle (*Silybum marianum*) and Wild Tulip (*Tulipa sylvestris*). Herbs such as Borage and Fennel are also likely to be denizens.

Recently-introduced plants now firmly established and increasing include Pirri-pirri-burr (*Acaena anserinifolia*) on sandy tracks at Studland, Hoary Cress (*Cardaria draba*) on sandy shores since 1871, American Willowherb (*Epilobium adenocaulon*) in gardens, Rosebay Willowherb (*Epilobium angustifolium*) by waysides, Swamp Stonecrop (*Crassula helmsii*) in ponds and wet places, Hedge Crane's-bill (*Geranium pyrenaicum*) on hedgebanks, Giant Hogweed (*Heracleum mantegazzianum*) by several streams and ditches, Indian Balsam (*Impatiens glandulifera*) by rivers, Oxford Ragwort (*Senecio squalidus*) on railways and roadsides, as well as dense clumps of Japanese Knotweed (*Reynoutria japonica*) by waysides, and *Rhododendron ponticum* in woods and heaths. The Japanese Knotweed and *Rhododendron*, as well as the tiny *Crassula* and the Giant Hogweed, are aggressive plants in their particular habitats and capable of excluding other vegetation.

As new habitats are created on roadside verges, infilled rubbish dumps, carparks, golf courses, cleared forestry and agricultural land, and building sites and other disturbed soil, opportunist plants become established, temporarily free of competition and displaying an astonishing variety of old and new species, from thousands of Common Poppies to a single Lizard Orchid. The list of alien plants grows longer each year as seed arrives by chance from the European mainland and elsewhere, in bird seed, by air currents, from travellers and their vehicles, or by deliberate planting, and whenever garden plants escape or are discarded. Not all become naturalised: many are casual plants which have been recorded only very occasionally, such as *Calandrinia ciliata*, *Eruca hispanica* or *Kochia scoparia*.

Some aliens now growing wild in and around towns and villages are: Large Bindweed (*Calystegia silvatica*), Canadian Fleabane (*Conyza canadensis*), American Willowherb (*Epilobium ciliatum* = *E. adenocaulon*), Gallant Soldier (*Galinsoga ciliata*), Slender Speedwell (*Veronica filiformis*), as well as 'bulbous' plants like Few-flowered Leek (*Allium paradoxum*), *Allium roseum*, Three-cornered Leek (*Allium triquetrum*), *Crocus* sp., *Cyclamen* sp., Winter Aconite (*Eranthis hyemalis*), Snowdrop (*Galanthus nivalis*), all of which add interest to grassy road verges.

DISCUSSION

There is nothing new about seasonal and transient changes in the countryside but during the past fifty years modern methods have caused changes which are often permanent and irreversible, resulting in diminishing populations of wild plants in all kinds of habitat throughout the county. The evidence is extensive and the greatest effects have been noted in the grassland communities. The rate of change may now have slowed down in agricultural and forestry land but as the pace of building and road development appears to increase in several areas the original flora is further depleted and replaced if at all, by common 'weeds' and alien species. The findings in the 1979-1986 survey of Professor Good's botanical sites in Dorset are already out-of-date because of continued development.

The plants referred to in this account include many uncommon species restricted to particular habitats and less able to adapt to environmental change. Many survive in areas of old woodland, chalk grassland, heathland, old meadows and along the coast, areas which are protected and conserved by land owners and others. However, not all species grow in the safety of nature reserves. There remain innumerable places of botanical importance too small for special protection: neglected ponds, river backwaters, marshy field corners, heathy grassland, hay meadows, relic woodland, ancient hedgebanks, old walls, chalk pits, embankments and suchlike. All are especially vulnerable because their value is not easily recognised and they can be readily tidied up and swept away. Whenever this happens, the detrimental effects of habitat change on the Dorset flora continues.

ACKNOWLEDGEMENTS

My appreciation is extended to Professor Good, whose extensive botanical work in Dorset has made possible this brief account. I would also like to thank the field botanists in Dorset who have contributed much valuable information, and all those responsible for maintaining the unspoilt parts of the countryside where flowers may still be found plentifully in the wild.

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APPENDIX

Observations on sites of Professor Good's Botanical Survey of Dorset: number of sites surveyed and the number and percentage of sites relatively unchanged after fifty years

	No. of sites surveyed by Good	No. of sites unchanged after 50 years	% of sites unchanged after 50 years
Wet places: rivers, riversides, streams, lakes, ponds, pools	385	312	81%
Marsh sites: marshes, marshy meadows, swamps	318	166	52%
Maritime sites: cliffs, undercliffs and shingle, sandy and rocky shores, mud flats and salt marshes	240	226	94%
Heathland sites: boggy heath, dry heath, grass heath, bracken heath, heath tracks	505	227	45%
Grassland sites: calcareous grassland, meadows, pastures, hayfields, embankments, roadsides, bracken grassland	1504	346	23%
Hedgebank sites: hedgebank boundaries of parishes, estates, farms, woods, drove roads, trackways and others	1737	1424	82%
Thicket sites: thorn and other thickets with grass, heath or bracken	431	121	28%
Woodland sites: deciduous plantations, copses, woods and wet woodland	1535	998	65%
Other sites: walls, quarries, pits, rabbit warrens, disturbed ground; also <i>some</i> of the original arable and fallow fields	572	275	48%

Dorset Archaeology in 1989

CRAB FARM NEOLITHIC ENCLOSURE

An air photograph (Papworth 1988, p.141) shows a linear ditch traceable for some 200 m west of the western edge of the enclosure at ST95520281. Before scheduling the site, H.B.M.C. requested that a section be cut across the ditch to determine its significance in relation to the enclosure. It was thought from the appearance of the ditch that it could be earlier than the enclosure and should therefore be included within the scheduled area.

In August 1989 the plough soil from an area 25 m long and 1 m wide aligned north-south was excavated. Part of the western edge of the enclosure outer ditch was seen and plotted but not excavated.

Closer examination of the stratigraphic evidence from last year's excavation suggests that this ditch is Bronze Age in date and post-dates the ditch inside the enclosure bank. This outer ditch is similar in profile and size to the ring ditch RCHM Shapwick 42 examined as part of the beech avenue work (Papworth this volume).

The linear ditch was not located. It appears to have been ploughed out to survive only as a soil mark.

Martin Papworth
The National Trust

Royal Commission on Historical Monuments, 1975. *Dorset Vol. V*.
Papworth, M. D. J., 1988, 'A Neolithic Enclosure. Crab Farm, Shapwick'. *Dorset Proceedings* 110, 141.

THE STOUR VALLEY GRAVELS PROJECT 1989 INTERIM REPORT

Gravel Extraction

Moortown and Knighton Farm quarries are now undergoing reinstatement to agricultural use, and no further excavation of unquarried areas in these fields is anticipated. A new quarry was opened in the Strawberry Field (SZ 046974) 4 hectares of which have been stripped of topsoil. In 1990 it is anticipated that the remaining 8 hectares of the Strawberry Field will be topsoil stripped.

Moortown

Reinstatement of Moortown Quarry involved the removal of a soil storage bank immediately to the north of the neolithic settlement site excavated in 1984 (Horsey and Jarvis 1984). Prior to landscaping and the construction of a field drainage system, an area approximately 140 metres long by 9 metres wide was systematically stripped to the base of the subsoil using earthmoving machines.

Further neolithic activity was indicated by a group of six small pits and a nearby large pit, respectively 40m and 30 m north east of the 1984 site. The large pit was cut 1.7 m into natural gravel and is extremely unusual in a neolithic context. All these features contained examples of neolithic narrow blade flint work and/or pottery fragments of 'south western' neolithic type.

An isolated pit, 30 m north west of the 1984 neolithic settlement site, produced a barbed and tanged arrowhead together with early bronze age pottery including rusticated and beaker sherds.

A pair of undated post holes and several post-medieval boundary ditches were also uncovered.

The Strawberry Field

Topsoil stripping was conducted by the gravel company under continuous archaeological supervision. Fifteen pits were uncovered, thirteen of which showed signs of extensive *in situ* burning but no dating evidence. One pit contained neolithic narrow blade flint-work and the other bronze age pottery and a flint awl. An isolated un-urned cremation was excavated and will require radio-carbon dating.

D. R. Watkins and K. W. Collins
Borough of Poole Museum Service

Horsey, I. P. and Jarvis, K. S., 1984, 'The Stour Valley gravels project', *Dorset Proceedings* 106, 114.

NEOLITHIC AXE FROM GILLINGHAM

The polished Neolithic axe from Gillingham (Keen 1976, 56) was examined by the Implement petrology Survey of the South-West in 1976, and identified as having Group VI characteristics. (Serial No. 1690).

It was reported lost (Ross 1987, 95) but has now been found and

recent assessment describes it as being of sedimentary rock, lacking distinctive characteristics, but not inconsistent with a Lake District origin (Dr. Isobel Smith, pers. comm.)

The axe has been presented to Gillingham Museum for display.

M. S. Ross
Shaftesbury & District Archaeological Group

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TWO NEW PREHISTORIC SITES ON SOPLEY COMMON, HURN

Mesolithic site

This site is situated on the 30 m contour upon the summit of a small hill close to a possible bowl barrow. SZ 129974. The following flints have been collected – four microliths, two blades and four scrapers.

Bronze Age Bowl Barrow

The mound is approximately 1 m high and 30 m in circumference. 13 core fragments and 53 flakes have been recovered from the surface of the mound. The barrow has been badly damaged.

The area is heathland which is now owned by the Dorset Trust for Nature Conservation. During the 1939-45 war the area was occupied by building associated with RAF Hurn.

Acknowledgements

I would like to thank the D.T.N.C. site warden for his permission to examine the site and G. Dowdel for examining and commenting on the flints.

Ken Standing

WORKED PORTLAND CHERT AND FLINT FROM TIDMOOR POINT

Two artefacts of Portland chert have been found on the beach of the Fleet at Tidmoor Point by pupils of the Castle School, Taunton. The first, found by Melanie Sutcliffe (SY 644786), is similar to artefacts of late mesolithic or early neolithic periods and is probably a scraper. It measures 45 mm by 40 mm and is of dark grey Portland chert. Not far away another pupil found a gun flint of roughly square shape, which may be from a musket. It is made of light brown flint.

The second prehistoric artefact was a bifacially flaked knife of Portland chert, found by Paul May (SY 643788). Phil Harding of the Trust for Wessex Archaeology has kindly examined it and confirms that it is a knife of Portland chert and probably Neolithic. It measures 91 mm by 38 mm. A small area of gloss on a narrow section of one side is of unknown cause. The findspot is regularly washed by the tide.

Robin T. Pearce
The Castle School, Taunton

POSSIBLE BARROW AT CHURCH KNOWLE

Six sherds of thick (13-14 mm) coarse pottery were found by a holiday-maker in a ploughed field at East Creech Farm (SY 9314 8280) in September 1986. The pottery was examined by Dr. A. B. Woodward of Birmingham University, who identified it as Bronze Age. This, in conjunction with soil-marks visible at the site, suggests that it is the location of a barrow.

Claire Pinder

KINGSTON LACY BEECH AVENUE, INTERIM REPORTS

The beech avenue flanking the Blandford Road (ST 945038-957028), extends for some 4 km from the western edge of the Kingston Lacy Estate to the edge of Kingston Lacy Park. It was planted in 1835 by William Bankes and today, although still a fine landscape feature, the avenue is past its prime.

In recent years several of the trees have died and have needed to be felled. Rather than replanting piecemeal in the gaps left by

felled trees it was decided to plant a new avenue 20 m to the north and to the south of the 1835 avenue.

This new planting would affect some of Romano British and Pre-historic sites which lie in the vicinity of Badbury Rings. Archaeological survey and excavation were carried out between December 1988 and March 1989 to record those areas where the damage to stratigraphy by developing root systems would be severe.

Two round barrows RCHM Shapwick 40 and 41 (ST94770357, ST94790354) were taken out of the plough, included within the new beech avenue fenced area, but not planted on.

Further east (ST94830352) the line of the avenue crossed a ring ditch RCHM Shapwick 42 visible on A.P. C.U.A.P. AQY95. A trench 55 metres long and 6 m wide was excavated, revealing the arc of a ditch 80 m in diameter. The interior of this northern edge of the feature had been severely scored by ploughing and no features survived within it.

The ditch was 3.5 m wide and 1.2 m deep. The flat bottom of the ditch was 1.5 m wide. The primary filling of frost fractured chalk contained few finds but from the layer of soil above it numerous sherds of pottery were recovered. These have been provisionally dated to the Middle Bronze Age.

The bank and ditch excavated in 1965 by H. and F. Vatcher (RCHM Shapwick 35 ST95600301) was partially crossed by the avenue. The excavation of the affected area located the position of the 1965 excavation. A section through the 'V' shaped ditch measured 4.4 m at the top tapering to a flat bottom 0.15 m wide. The ditch was cut to a depth of 2.7 m into chalk.

Pottery finds confirmed Gingell's (1987, p.78) reinterpretation of the ditch as a Middle-Late Bronze Age feature. The ditch was partially excavated on the south side of the Blandford Road ST95500300. Air photographs (Papworth 1988, p. 141) show this feature continuing to the south-west.

The bank on the east side of the ditch survived only as a swelling of protected chalk natural but this had allowed an area of Romano British ploughsoil to survive for 10 m to the east of it.

Several other ditches were examined which appear to be field boundaries. They were of two types. One had a shallow rounded profile, the profile of the other formed a flat bottomed 'V'.

Three examples of the first type were excavated. ST95420307 was 2.0 m wide and 0.18 m deep, ST95680295 was 1.4 m wide and 0.18 m deep and ST95880278 was 2.7 m wide and 0.18 m deep. The fillings contained small fragments of prehistoric pottery and lay below deposits containing Romano British pottery.

Four examples of the second ditch type were excavated. ST95360313 was 0.7 m wide at the top, 0.2 m wide at the bottom and 0.40 m deep, ST95410307 was 0.7 m wide at the top 0.2 m wide at the bottom and 0.34 m deep. These two ditches are associated with a 'celtic' field system visible on A.P. R.A.F. CPE/UK/1975. Two smaller ditches at ST95830281 were 6.9 m apart and ran parallel with one another. They may have formed the side ditches of a trackway. Each ditch measured 0.42 m at the top, 0.28 m at the bottom and was 0.12 m deep.

At ST95820284 a group of post-holes were excavated: the average size of these was 0.3 m dia. and 0.3 m deep. They formed the plan of a round house 6.5 m in diameter with a porch on the south-east side. Pottery from one of the post holes indicated a Bronze Age date.

Nancy Grace and Rob Early supervised the excavations. Thanks are due to members of East Dorset Archaeological Society and Wimborne Archaeological Group for their help.

Martin Papworth
The National Trust

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DUROTIGIAN COINS FROM WINTERBORNE MONKTON AND DURWESTON

Fifty coins were found by Keith Bickmore, on 4 and 5 November 1989 in the field east of Maiden Castle (SY 675882). Twenty four are staters of Mack Type 317/318 (Mack, R. P., *The Coinage of Ancient Britain*, 2nd ed. 1964): twenty three are all quarter staters of Mack Type 319. Three are quarter staters but too eroded for identification. The majority of the coins are of silver, though some are of poor quality, and two are of copper alloy coated with silver. This find was made in the same field as 30 staters, and 12 quarter staters found by Mr. Bickmore on 15 and 16 October 1988, and 20

staters and 1 quarter stater found by Mr. Bickmore in July 1986.

Three Durotrigian silver staters were found by Miss Stokes on 17 September 1989 in Durweston parish (ST 857076). They are all of Mack Type 317/318.

Laurence Keen

OBSERVATIONS AT HAMWORTHY 1989

45 Blandford Road, Hamworthy

An 8 m × 2 m excavation along the west side of this property, (SZ 0028090230) 20 m south of the front fence line revealed the end of a ditch aligned N.W-S.E, terminating 1.6 m from the eastern baulk. This was 0.65 m wide and was cut 0.5 m into the natural sand.

0.55 kg of pottery was recovered from the feature, consisting mainly of local black burnished wares of the mid 2nd/3rd centuries A.D.. Also found were two sherds in a cream fabric, and several fragments of briquetage.

Although difficult to draw firm conclusions from an excavation of this size, this feature is probably associated with the main Romano-British settlement of Hamworthy (Smith 1930).

There was no evidence of the late Iron Age port (Jarvis 1982, Smith 1930) which lies north of here.

Hamworthy Lodge

A watching brief of foundation trenches, excavated through the line of the Badbury-Hamworthy Roman Road (SY 9992090538), exposed the sections of two ditches, 1.5 m wide, cutting 0.3 m into natural gravel. These ran parallel across the site, approximately 8 m apart.

Neither feature produced dating evidence, but their alignment and location would suggest that they were in fact all that remained of the road at this point.

The site is very close to a change in the line of the Roman Road, and such changes sometimes indicate the presence of fort defences. However, no evidence of this was observed, suggesting that the change of direction here was simply intended to take the road more directly to the Hamworthy shoreline.

Detailed records of both these sites are held in the Poole Museum Archive. PM51-52.

Acknowledgements

Thanks are due to the developer Mr. P. Smith who funded the excavation at 45 Blandford Road.

Kevin W. Collins
Borough of Poole Museums Service

Jarvis, K. S., 1989, 'Interim report on excavations at Hamworthy in 1982', *Dorset Proceedings* 104, 181-182.

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GRIMSTONE DAIRY, STRATTON

Observations were carried out during the construction of a house at Grimstone Dairy (SY 64309435) during August and September 1989, to fulfil a condition of planning permission. The site was considered to merit observation because of its proximity to the find-spot of a Bronze Age hoard, to a Roman Road immediately to the south (RCHM 1970, 541) which ran from Dorchester to Ilchester, and a late Iron Age/Romano-British settlement on Grimstone Down, some 1300 m to the north (RCHM 1952, 228ff).

The site had been under arable cultivation and a 0.2-0.3 m topsoil had built up. Artefacts recovered from the ploughsoil included a small number of flint flakes and burnt flints, a broken schist whetstone of uncertain date and two sherds of post-medieval pottery. No archaeological features were noted cutting down into the underlying Clay-with-Flints subsoil during topsoil stripping, nor foundation cutting. The subsoil was at least 2 m deep.

The complete lack of archaeological features and small number of artefacts recovered is surprising, both because of the known archaeological material in the area and also the location, a gentle south-facing slope just above the river valley.

The fieldwork was carried out by N. J. Adam, D. E. Farwell and P. Pearce; and the project was financed by the developer. The archive will be deposited with the Dorset County Museum.

Susan M. Davies
Trust for Wessex Archaeology

RCHM 1952, Royal Commission on Historical Monuments (England): *Dorset Vol. I: West*.

RCHM 1970, Royal Commission on Historical Monuments (England): *Dorset Vol. II: South-East*.

CIST BURIAL, PORTLAND

During the digging of foundation trenches for a garage behind 87

Easton Street, Portland (SY 69157212), in March 1989, a cist grave was discovered. The cist, aligned roughly east-west, was about 450 mm wide, a maximum of 130 mm long, and was constructed of irregularly-shaped stone slabs on the sides and top. The extended burial, head to west, was very disturbed. Other human bones were observed to the south-west. Another burial was reported later but could not be examined. The grave is presumably Roman.

Laurence Keen

THE ROMAN ROAD FROM LAKE FARM TOWARDS WINCHESTER

At Park Farm, just east of Wimborne, there is a long ridge, reliably identified in 1928 by Col. C. D. Drew and O. G. S. Crawford as the agger of a Roman road apparently connecting the New Forest with Corfe Mullen. The feature has since been scheduled (Dorset Ancient Monument 738), but its significance has been doubted and it was omitted from the latest edition of the OS map of Roman Britain. If such a road existed, it should now be considered as a link running from the major military base at Lake Farm, south-east of Wimborne, to reach Winchester by way of Stony Cross. The course of the road must have traversed one of the few remaining areas of relatively undisturbed open country in that part of Dorset, now known as the Avon Forest Park (North Block and South Block), administered by Dorset Council.

Promising indications were noted in the gorse and heath of the South Block during the autumn of 1988 and with the cooperation of the Warden and the County Archaeological Officer, eight profiles were surveyed by Dorset Planning Dept. in June 1989 over a distance of some 500m. The results confirm the continued presence of the road-ridge and reveal a slight angle in the course at SU 12350155 as it goes on to Watton's Ford. Observation in easier terrain westward has traced the ridge back as far as the intersection with Foxbury Road (SU 11900157).

With the above information it is now possible to reconstitute most of the road from Park Farm to the river Avon. Despite the construction of, first, railway, then, by-pass, the missing stretch between Park Farm and Lake Farm is probably still traceable, if buried. This route was without question an important element in the pattern of military roads that led from the Roman base at Lake Farm. A full description of that road-system is planned.

N. H. Field

A ROMAN COIN FROM WAREHAM LADY ST. MARY

A bronze coin of the emperor Vespasian was found by schoolboy Nathan Anderson on the soil banks on the east side of the newly completed southern part of the Wareham by-pass (SY 91358660).

The well preserved coin was minted in Lugdunum (Lyon) and was dated 72-73 A.D. The legend on the obverse is IMP CAESAR VESPASIAN AUG COS III with a bust of Vespasian facing right. The reverse of the coin shows Peace with a small altar to her left and the legend PAX S AUG C.

Although the coin was found in disturbed soil, it was in the general vicinity of the extensive Roman pottery site excavated in 1986-7.

The coin is retained by the finder. Thanks to Roger Peers for help in the identification.

Lilian Ladle

BUCKNOWLE, 1989

Work was concentrated on the third wing of the courtyard villa, located during the previous season. At the western end, substantial stone-footings of an apparently isolated building measuring 6 m by 4.5 m internally were linked to other structures of as yet uncertain size and form that adjoined on the north. The building seems to have been constructed during the early third century, but about A.D. 300 it was at least partially incorporated into a barn-type structure built on its east side as part of the new courtyard villa. The rubble foundations of a terrace 2.5 m wide, extended along the outside of the east wall of this early building and seem to have been contemporary with it.

The upper levels of the fourth century barn had been extensively destroyed as a result of both demolition and modern ploughing, which made interpretation difficult. It is thus not clear at present whether the substantial but partly robbed stone-wall along its northern side was associated in the first place with the earlier structure. A hard-standing 1.5 m by 0.75 m to the south of this wall is thought to mark the position of a doorway, while an external area was found to be edged by a curving drain lined with limestone slabs.

Two linear spreads of chalk and limestone rubble ran parallel to this same wall on its south, at distances of 4 m and 10.5 m. They may have been the foundations of cob or wattle-and-daub walls. The southern spread contained a row of four square post-holes, some 2.5 m apart and stone-lined to take timbers 25 cm across. Towards its western end the barn was further sub-divided by two parallel rows of stone post-bases or stylobates 2.25 m apart.

A large limestone hearth, two storage-jars set into the ground and child burials along the walls together suggest that this area was used for accommodation by the workforce during the fourth century.

A number of pits, early Roman in date, preceded both phases of the building. For the pre-Conquest period, probably back as far as the fifth/sixth centuries B.C., there were pits, gullies, post-holes and ditches, but without any discernible pattern. A north-south ditch of the earlier Iron Age proved to be the continuation of one found in 1981 some 10 m to the north.

The excavation is planned to end in 1991, which will be the sixteenth season.

J. Collins, N. Field, A. Light

DOLE'S ASH FARM, PIDDLTRENTHIDE

New tree-planting has provided the opportunity for more field-walking on this adjacent Romano-British site (ST 728008), first recorded in 1949 (*PDNHAS*, 70 (1948), 62), and still under arable cultivation. Below the 500 ft. contour a scattering of occupation debris was observed. This included two pieces of combed box-tile, several broken tegulae and imbrices. Pottery fragments are consistent with the late 3rd to 4th-century date proposed previously.

Laurence Keen

ROMAN COIN HOARD FROM NETHER COMPTON

While metal-detecting at Middle Farm, Nether Compton in February 1989, Mr Michael Pittard discovered a coin hoard. The hoard consists, by estimation, of some 22,500 copper alloy coins, apparently all of the House of Constantine. The coins had been buried in a large double-handled pottery vessel. The hoard is presently in the Dorset County Museum, awaiting more detailed study.

Laurence Keen

CHARLES STREET, DORCHESTER, WESSEX COURT DEVELOPMENT

Excavations in advance of development were carried out between May and September 1989. The development site (SY 69359045) covers approximately 1.7 ha. and is situated in the southern part of the Roman town, stretching northwards from the late 2nd century defences for some 200 m across several *insulae*. This accounts for about 6% of the Roman town. Constraints of time and available finance, set as part of the planning permission, meant that only some 4% of the development area could be excavated.

Stage 1 Three trenches in the north-eastern part of the development area were excavated over a six-week period (Figure 1, Areas 1 and 2). This location was chosen in order to build on information gained from large-scale excavation on the adjacent sites of Waitrose in 1984, and Wollaston Fields to the east, the site of the extensive Roman baths (now a Scheduled Ancient Monument). These previous excavations had posed a number of questions on the layout of the Roman town, but also revealed a late Neolithic monument (c. 2600 B.C.), apparently of unique form. The current excavations aimed to elucidate not only the sequence of development of the town, but also to investigate further the alignment and nature of the Neolithic monument.

Stage 2 Two trenches were excavated in the south-western part of the development area (Figure 1, Area 3). They were positioned running north-south so as to produce a long section through the archaeological deposits extending north from the inner edge of the southern line of the town defences into the interior of the Roman town itself. In this way both the nature of the southern part of the Roman town defences and the layout and use of the adjacent enclosed section could be investigated.

The present development area is important archaeologically because it lies in a shallow coombe filled with deep soil deposits, in an area little disturbed by medieval and post-medieval building; therefore the earlier archaeological levels are likely to be well-preserved across the entire area, apart from the Charles Street frontage itself where most of the houses had cellars.

Preliminary Results

Area 1 Two small trenches covering c. 125 sq m were excavated,

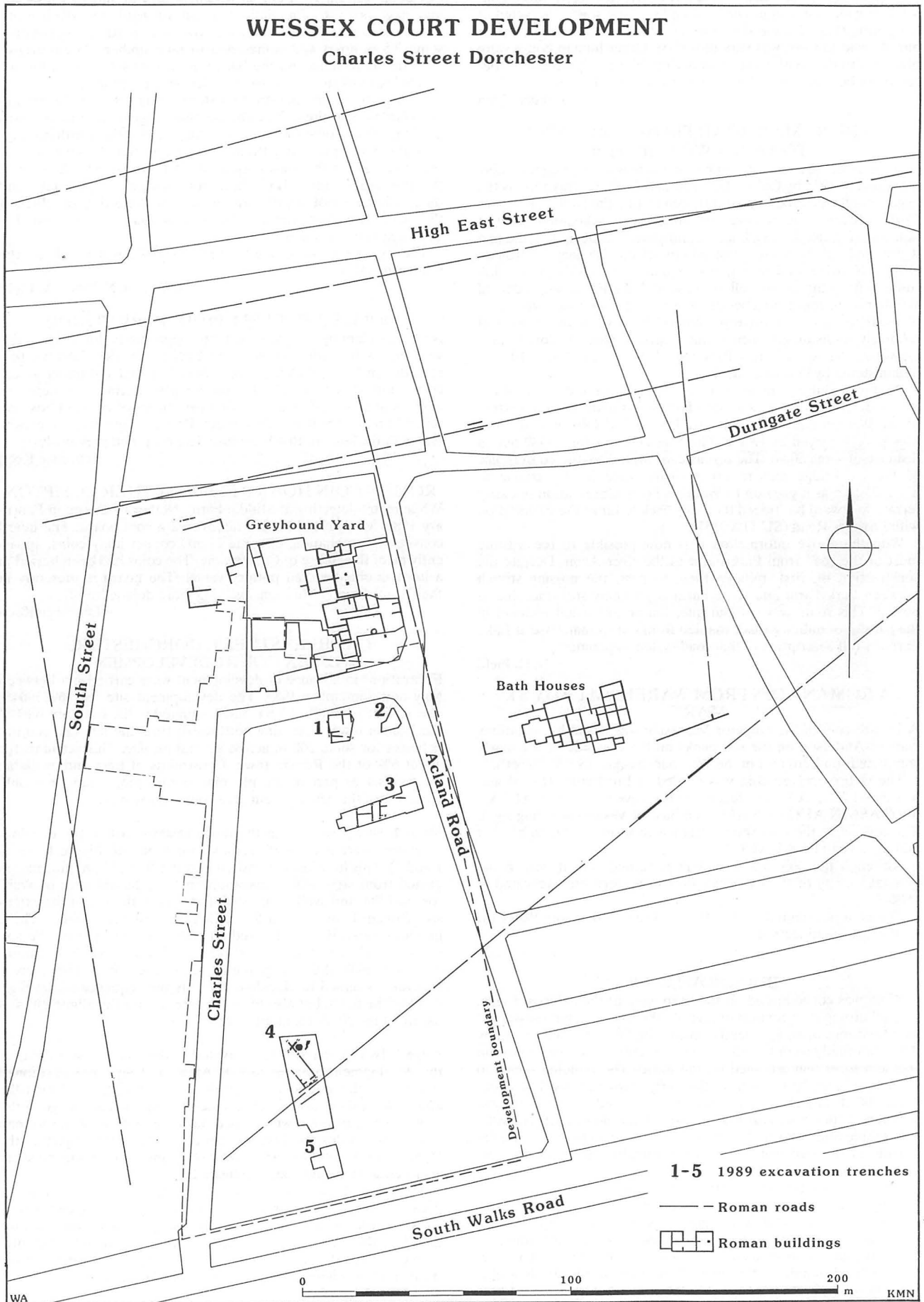


Figure 1. Charles Street, Dorchester.

the upper modern levels being taken out by machine. In the western trench, although modern building has severely truncated the archaeological deposits, the remains of three late Roman buildings with stone footings were found. In the corner of the southern building one baby burial was found, buried under the floor.

Underneath the Roman buildings, five substantial post pits belonging to the arc of the Late Neolithic monument were located, but not excavated because of time constraints in this area.

Archaeological remains in the eastern trench in Area 1 were better preserved, and a sequence of medieval and post-medieval buildings (including an early 17th century barn belonging to the Reverend John White) were excavated. These buildings cut through a number of early Roman floor levels, associated timber buildings and pits.

Area 2 A rectangular trench, c. 200 sq m in area, was excavated. The late medieval and modern soils were removed by machine down to the level of surviving earlier medieval and Roman structures. The archaeological deposits in this area were extremely well-preserved, as anticipated, as the area fell within the open fields of the medieval town and there was little disturbance until the late 19th century and even that is slight.

A complicated sequence of archaeological levels was uncovered; this includes very late Roman and early post-Roman layers (5th century and later) and structures, courtyard surfaces and possibly buildings, which are unusual in Dorchester. The precise chronological framework will only be known when the post-excavation analysis of the artefacts has been carried out.

In addition part of a probably very large late Roman building was uncovered. The building had at least three phases of construction and modification. In a limited space the building plan is difficult to interpret accurately, but it seems to have had a range of rooms built around a courtyard, paved with crushed limestone or cobbles. A narrow corridor or walkway separates the back rooms (on the west side) from the courtyard, and it is possible that the structure may have been part of a series of shops for some of its period of use, which may span 200 years.

The interiors of the rooms were well-preserved, and some walls were still covered with painted wall plaster. One room contained a complete oven or small furnace, along with a stone-lined tank built into the wall. Again the survival of such internal features is not common in the centre of the town. A number of complete pots were built into the structure, in doorways and under floors including one in the corner of the southern room which had an infant burial laid on top of a limestone slab over it. Infant burials in late Roman buildings are not uncommon, but examples like this one, deep within the floor and over a pottery vessel, are rare, and it seems likely that it may either be a foundation burial for the building or a 'ritual' deposit.

At present the construction date of the stone buildings is uncertain, but they overlie a sequence of timber buildings and associated pits and wells. There were at least two phases of timber buildings and evidence from demolition rubble suggests that these were also decorated with painted wall plaster and were quite sophisticated structures. Found with the demolition levels from these timber buildings were three very fine clay *antefixes*, moulded clay tiles in the shape of faces, which would have decorated the gables and ends of the buildings, again indicating some status for the buildings. These buildings probably date from the later 1st and 2nd centuries, from the initial development of the Roman town.

Under these timber buildings the old ground surface was preserved – the soil/turf from the period before the construction of the town. Finds trampled into this surface included, unusually, two Durotrigian 1st century coins; probably the first time such coins have been found sealed within secure archaeological levels under the layers of the Roman town.

The line of the Neolithic monument was again located, but unexpectedly in the eastern end of the trench where three post pits were found. The alignment has changed markedly, swinging to the east, which contradicts the previous interpretation of the monument as an arc or circle. However, it is impossible to be sure whether an entrance has been found in the current excavations, or whether the monument is an avenue of posts, or merely a tighter arc than anticipated. Only area excavation could resolve this.

One post pit was excavated; it was cut three metres into the natural Coombe Rock (5 m from present ground surface). Remains of the substantial oak post were identified, and six antler picks had been laid around its base.

Area 3 Two trenches covering c. 300 sq m were excavated; the

uppermost deposits, below the surface of the car park, being removed by a mechanical excavator. In the southern trench almost a metre of modern backfill and building rubble relating to the old cattle market was removed. In the northern trench dark earth deposits, 2 m deep, representing medieval and later agricultural activity were again removed by machine.

In the southern trench part of a substantial bank of re-deposited chalk, surviving to a height of 2.5 m above the Roman ground surface (3.5 m below the present car park surface) was located. This chalk bank is the remains of the primary defensive rampart of the Roman town, in front of which were three massive ditches and a counterscarp bank. The northern (internal) side of the chalk bank had been consolidated by the dumping of a massive deposit of clay and chalk, which is likely to represent the late Roman refurbishment of the defences, perhaps at the time when the stone wall was added to the front of the defensive chalk bank. Underneath the packed chalk bank is an earlier chalk and turf bank, about 1 metre high. This earlier bank is probably a marking-out bank for the first phase of the defences, but could relate to pre-town activity, possibly of Roman military or prehistoric date.

The northern trench contained, at the southern end, a number of Roman pits, a well some 7 m deep and a sequence of deep soil deposits which have produced building and occupation debris in some quantity. The building debris included another *antefix* of the same type. To the north of these soils, a shallow gully and a ditch terminal were uncovered. These linear features run parallel to and south of a Roman road. The road was constructed using, and subsequently repaired with, layers of yellow and grey gravel which produced a well-drained and cambered surface. At least six phases of re-surfacing work have been recognised and the road surfaces show signs of substantial traffic – deep wheel ruts and much wear. Unusually no roadside ditches were found, only small, shallow gullies. The alignment of the road suggests that it ran south-west from the east gate of the town towards the south gate and the approach road from the Roman harbour at Radipole. The number of repairs and resurfacing episodes suggest it was in use throughout the Roman period, as a main through route.

To the north of the road, and aligned on it, was a sequence of stone and timber buildings. The later Roman stone structure was a rectangular building and had been re-built at least three times. Most of the walling had been robbed away (probably in the very late Roman and also in the medieval periods), but traces of mortar and construction debris served to outline the original ground plan. Within the building were two stone-lined ovens, a crushed tile floor and several packed chalk floors. Burials of seven infants were found within the building, generally under floor levels, but it seems likely that most, if not all of them are earlier than the stone structure. One of the babies was buried with three pottery vessels, the bases of which survived. At the north end of the trench a Roman stone-lined well was found, and part of a Spanish amphora was built into its wall. The well seems to have been within a building, which itself was rebuilt and modified several times, including having a doorway adjacent to the well blocked with massive stones. Two further infant burials were associated with this building. The sequence is complex and also complicated by the small area of excavation, which did not encompass the whole structure.

Underlying the stone building was at least one early Roman timber structure, again aligned on the road, and it is possible that most of the infant burials were contemporary with this phase. Evidence from silting layers between the timber and stone buildings suggests that there may have been a period of abandonment or disuse between the phases of occupation, though further work is required to confirm this. There is, as yet, no clear dating for the timber phase, but a reasonably large quantity of 1st century samian in the general area suggests that it is very early within the life of the town.

The excavations have yielded an important set of data, which complements the previous work. The nature of activity and quality of finds appears to differ in the two parts of the development area examined, though this can only really be assessed during the next few months post-excavation work. It is very noticeable, however, that the quality of preservation of the archaeological levels and features is markedly better than in those previous excavations and hence the quality of information recovered much better.

Susan M. Davies and David Farwell
Trust for Wessex Archaeology

OTHER SITES IN DORCHESTER

In the granting of planning permission for the redevelopment of the former Grove Garage site, Top O' Town, Dorchester (SY 68909072) a condition was included for archaeological investigation

before construction commenced, as the site straddled the inferred line of the Roman town defences and was adjacent to the site of Roman burials.

Three machine-cut trenches were excavated across the postulated line of the defences, within the layout of the proposed building foundations. Two ditches were located in these trenches and their fills were removed by hand, in an effort to retrieve dating evidence. The full extent of the western ditch was established; its top width being 5 metres and maximum surviving depth 2.3 metres at the southern end of the site. Its profile was V-shaped, filled with homogeneous dark brown loam; one sherd of New Forest indented beaker was retrieved from the fill. The second ditch lay 12 metres to the east, on the edge of the site, most of it under the pavement and road. These ditches probably represent the outer (ie western-most) and central ditches of the Roman town defences.

The work was carried out by Michael J. Heaton; and the project financed by the Developers, David Wilson Homes (Southern) Ltd.

Susan M. Davies
Trust for Wessex Archaeology

Roman Walls

During March 1989 Mercury Communications Ltd., cut a trench to carry a cable along Bowling Alley Walk, Dorchester (SY 69029032 to SY 69179034). Bowling Alley Walk follows the southern line of the defences of the Roman town of *Durnovaria*, and, including lengths along West and South Walks, is a Scheduled Ancient Monument. Consequently the Trust for Wessex Archaeology was commissioned by English Heritage to undertake a watching brief during construction work in March 1989. The defences of the Roman town at Bowling Alley Walk have been the subject of archaeological investigation and observation on several occasions, summarised in RCHM (1970, 545-549), and in 1985 observations were made by the Trust for Wessex Archaeology during the excavation of a British Telecom trench along the Walks, 2-5 m to the south of the present cable trench (Woodward and Pearce 1985).

The cable trench ran for a total length of 160 m and was hand-excavated to an average depth of 0.5 m and width of 0.3 m. The exposed deposits consisted either of modern or post-medieval soils or the fillings of modern service trenches and nowhere was the trench sufficiently deep to identify the presence of deposits associated with the Roman defences.

Two inspection trenches were excavated to a maximum depth of 1.5 m at the east and west ends of the cable trench. The eastern pit had been heavily disturbed by modern service trenches, although a layer of compact clean chalk in the base of the pit, 65.12 m O.D., may represent a surviving deposit associated with the Roman rampart. In the western pit a series of silty loams and layers of redeposited chalk, truncated by modern deposits, were recorded dipping gently to the south. These deposits continued below the depth of the inspection pit and it is likely that they represent the upper levels of the rampart of the defences.

Roland Smith
Trust for Wessex Archaeology

RCHM, 1970, *An Inventory of the Historical Monuments in the County of Dorset Vol. 2, South-East*.

Woodward, P. J. and Pearce, P. A., 1985, 'Observations on Dorchester town defences', *Proc. Dorset Nat. Hist. Archaeol. Soc.*, 107, 166.

County Hospital

Assessment excavations in the grounds of the County Hospital, which is situated in the south-west corner of the Roman town, adjacent to the southern and western defences, were carried out in December 1989 (SY 69059040 [centre]). The work was commissioned by the Health Authority, before applications for planning permission for redevelopment were submitted.

At the time of writing the fieldwork is still in progress; however, so far a sequence of 1st to 4th century buildings has been identified, and a small area adjacent to the western defences examined. In that trench the tail of the chalk rampart was located, and behind that lay a Roman stone wall, which appears to predate the extension of the defences in the late Roman period.

The fieldwork is supervised by P. Pearce, and the project is financed by the Wessex Health Authority.

Susan M. Davies
Trust for Wessex Archaeology

Dingles Store

A small-scale excavation was carried out before redevelopment at the rear of the former Dingles store, off Princes Street, Dorchester (SY 69149067), in October 1989. Much of the area available for

investigation was heavily disturbed by post-medieval cellars, and excavation was limited to a single trench aligned north-south covering c. 25 sq m.

Vestigial remains of two late Roman stone wall footings were found adjacent to the Princes Street frontage, aligned almost parallel and at a right-angle to that street. No medieval features were identified, but a small amount of late medieval pottery was recovered from post-medieval features which formed the majority of features located. Remnants of a sequence of timber, stone and brick buildings of 18th and 19th century date were found. A shallow pit containing smithing debris, and two amorphous hollows containing domestic debris were probably associated with 18th century use of the site, but could not be directly linked with any building.

The work was supervised for the Trust by M. J. Heaton, and was financed by the developers, Ryan Fairbrother plc. Machine time was provided by the contractors, Acheson Construction. The site archive and finds will be deposited at the Dorset County Museum.

Susan M. Davies
Trust for Wessex Archaeology

58/60 High West Street

A small-scale excavation was carried out at the rear of the West Dorset District Council offices (SY 69099079), before planning permission was determined, in order to assess the archaeological potential of the site and recommend a strategy for preserving or recording any remains during development. The development site, planned for an extension to the existing Council offices, lies in the north-west quarter of the Roman town, and is near to the site of the medieval castle, just off a medieval street frontage.

Two trenches were excavated by hand during July and August 1989, one in the garden at the back of 36 Glyde Path Road, and one in the garden at the rear of 17 Colliton Street. Post-medieval features included the footings of a 19th century brick building in the north part of the former trench, cut down to bedrock chalk. A shallow pit dating to the 1840s lay to the south of this building, and contained a well-dated group of fine and coarsewares. A stone-lined 18th century well was found in the west part of the trench, and a small number of probably 17th century postholes were also noted. The second trench also included remnants of late post-medieval building footings.

Roman features were only recorded from the first trench at the rear of 36 Glyde Path Road. These included a shallow late Roman gully, a small number of postholes and stakeholes, and a large rectangular rubbish pit. The pit was excavated only to a depth of 1.5 m below the surface of the chalk into which it was cut, for safety reasons (it was cut by the 18th century well whose fill was distinctly vacuous). It contained a very large quantity of building material, including 742 fragments of good quality painted wall plaster, and was probably of 4th century date. All Roman deposits had been heavily truncated by post-medieval activity, which had also removed all trace of any medieval features, although substantial numbers of medieval sherds (12th to 14th century date) were found in the second trench.

The fieldwork was supervised by I. Barnes. The assessment was commissioned and financed by the West Dorset District Council.

Susan M. Davies
Trust for Wessex Archaeology

Middle Farm, Dorchester

The first stage, surface collection of artefacts, of an archaeological assessment before development at Middle Farm, Bridport Road, Dorchester (SY 677902 [centre]) was carried out in November 1989. This development site covers some 12 ha immediately west of the town. All artefacts were collected on a 25 m grid basis, and analysis continues at present. A large number of worked flint and chert flakes and tools, of late Neolithic to later Bronze Age date were collected, in addition to a quantity of Roman pottery, post-medieval pottery, bone and metalwork of varying date. Preliminary work suggests that there are a number of concentrations of material, which would benefit from further examination.

The fieldwork was carried out by P. Pearce and R. Hansford, and the project was financed by the Duchy of Cornwall.

Susan M. Davies
Trust for Wessex Archaeology

BRADFORD PEVERELL INHUMATION CEMETERY

Work continued on the late 7th/early 8th-century inhumation cemetery at Frome View (SY 36611 09278). Another burial, first observed in 1982, was excavated, bringing the total to 16. This also was in a shallow grave cut into natural chalk. Traces of an iron

object, probably a knife, could be seen on the left forearm of the skeleton, and two large flint nodules lay over the knees.

John Hawthorne, Claire Pinder

EMPOOL PIPELINE, EAST STOKE TO WEST KNIGHTON

An archaeological assessment and a watching brief during construction was undertaken by the Trust for Wessex Archaeology for the 14 km of the East-West Dorset Link Main (SY 84389028 to SY 74208783). This work was financed by Wessex Water Engineering Services. The pipeline was routed through a gentle undulating landscape of heathlands (including Stoke, Moreton and Warmwell Heaths) and reclaimed heathland comprising mixed arable and pasture agriculture and some woodland. The route crossed the flood-plain of the River Frome south of Bovington Camp before following the valley of Tadnoll Brook between Crossways and Warmwell.

The assessment was undertaken in October 1989 and consisted of augering of boreholes to examine soil depth, collection of artefacts from arable plots and the hand-excavation of test pits in areas of enhanced soil depth. The assessment suggested a low potential for archaeological deposits along the route and this would seem to have been confirmed as a result of the watching brief undertaken in November and December 1989. The following features were observed.

- 1 Observations on the projected line of the Battery Bank SY 84518936.
- 2 Roman material from Broomhill Bridge possibly associated with a spread of burnt flint and an undated ditch SY 81168821.
- 3 Observations on the projected bank of Moreton Deer Park SY 80198825.
- 4 Undated V-profiled ditch west of Tadnoll Barrow SY 78208745.
- 5 Undated bank and ditch possibly associated with earthwork in Brownjohn Plantation SY 77938744.
- 6 Late Neolithic/Early Bronze Age flint scatter west of Warmwell Mill SY 74708730.
- 7 Post Medieval material south of Empool Heath SY 74458743.

Roland Smith

Trust for Wessex Archaeology

WYTCH FARM OILFIELD, INFIELD FLOWLINES, CORFE CASTLE & ARNE

During the period April to August 1989 three archaeological sites were investigated in advance of construction of the final Wytch Farm infield pipeline connecting the Gathering Station on Wytch Heath to wellsite G on the Arne peninsula (SY 973852 – SY 957870). These sites had been identified during the evaluation phase of the project in the winter of 1988/9.

- 1) East of Corfe river, SY 97008534. Immediately east of the Corfe river valley, a complex series of occupation phases were discovered dating from the Bronze Age and covering a total area likely to be in excess of 10 ha. The phases may be identified as:
 1. Bronze Age field system
 2. Middle Bronze Age, possible burial deposits
 3. Late Iron Age industrial settlement
 4. Romano-British field system
 5. Medieval, Post-Medieval field systems
- 2) West of the Corfe river, SY 96648520. A single phase late Iron Age site, contemporary with phase 3 of the settlement east of the river was located and excavated within the pipeline route.
- 3) Near Saltern's Copse, Arne, SY 96168670. Evidence was found for possible saltworking in the form of substantial tips of burnt clay and fuel ash slag immediately north west of Slepe moor. Medieval pottery evidence suggests a date of 12th-13th century for the activity.

These sites represent the final fieldwork of the Wytch Farm project and will be incorporated into a monograph report due for completion in the summer of 1990. The work represents the first detailed archaeological study of a heathland landscape in Dorset and will catalogue the development of the natural environment and the basis of economic exploitation in the area from the creation of the heath in the prehistoric period to the present day.

Peter W. Cox

Trust for Wessex Archaeology

RYALL PIPELINE, WHITCHURCH CANONICORUM

A watching-brief was carried out in November and December 1989, during the construction by the Wessex Water Authority of a water main between Purcombe Farm (SY 41529633) and Ryall reservoir (SY 40609508), west of Bridport (SY 41529633 – SY 40609508). The area contained no known archaeological remains

and the observation work was requested by Dorset County Council.

The route of the main undulates markedly, negotiating quite steep slopes as it cuts across two south-east to north-west valleys formed by tributaries of the River Char. Topsoil is shallow (c. 0.20 m) clay loam; from Purcombe Farm to north of Beerlands Farm at Ryall, the subsoil is heavy yellow or blue-grey clay, with occasional sparse patches of gravel on higher ground; from Beerlands Farm to Ryall reservoir the subsoil becomes sandier, but is still heavy.

An easement approximately 8 m wide was stripped before the pipe trench was excavated, but examination of this revealed no recognisable archaeological features. The pipe trench was cut in stages, each one being backfilled before another section was started. One feature only was noted in the pipe trench, an undated ditch aligned west-east (SY 41409615). The ditch was sealed by topsoil; it had a slightly rounded, V-shaped profile and was approximately 3 m wide at the top and at least 1 m deep (the base was not reached). The ditch was filled with apparently homogeneous greyish brown clay. No finds were recovered from it.

The fieldwork was carried out by C. A. Farwell and S. M. Davies, and the project was commissioned and financed by the Wessex Water Authority.

Susan M. Davies

Trust for Wessex Archaeology

GILLINGHAM RELIEF ROAD

In March 1989 the Trust for Wessex Archaeology was commissioned by Dorset County Council to undertake an assessment at four points (ST 05806615; ST 05906630; ST 06056695; ST 11566303) on the proposed route of the Gillingham Relief Road. The proposed route will pass close to the western edge of the presumed extent of the medieval town and the eastern end of the later medieval suburb of Newbury (Penn 1980, 65-69).

Four machine trenches were examined on the Newbury, Turners Lane and Cemetery Road frontages. Those on the former where shown to have been heavily disturbed by modern features or the deposits consisted solely of modern surfaces and hard-core above Oxford Clay. However, to the west of Cemetery Road, a square-profiled trench, running parallel and adjacent to the street frontage, was excavated and contained pottery of medieval date. The feature probably represents a wall foundation although the lowest courses did not survive. No associated features or deposits were identified. To the west of this feature, topsoil sealed Oxford Clay, through which was cut a series of post medieval and modern rubbish pits.

Further assessment work on the proposed route is anticipated in 1990.

Roland Smith

Trust for Wessex Archaeology

Penn, K. J., 1980. *Historic Towns in Dorset*. Dorset Natural History and Archaeological Society Monograph Series, No. 1.

A MEDIEVAL 'BANNER' TYPE OF HARNESS ORNAMENT

Medieval harness pendants, have in recent years, become a regular feature of the *Proceedings*, (*PDNHAS*, 106 1984, 124; *ibid.*, 107 (1985), 170-1; *ibid.*, 108 (1986), 189-190) and it is pleasing to add a related, but much rarer, object to the corpus.

This is a copper alloy 'banner', (Fig. 2) found in late 1988 in the parish of Tarrant Rushton (approximately ST 939 050), by Mr K. Wheatley, who has kindly allowed the object to be studied and published.

The 'banner' is formed of a thick rectangular sheet of copper alloy, one side of which is rolled round to form a tube. All surfaces retain much gilding, and the two faces of the banner bear an enamelled design of a white stag surrounded by green foliage. Only some fifteen of these objects are known to the author, mostly of 13th-14th century date, and few have been published; one, from Salisbury (H. de S. Shortt, *Salisbury Heritage* [1973], 29, fig. 62) retains the iron rod on which the banner fitted and was free to rotate, and which passed through the centre of a copper-alloy base plate. A similar arrangement can be seen on a side-looped pendant from London (London Museum, *Medieval Catalogue* [1940], Fig. 40, 2). Exactly how they were used is uncertain; J. B. Ward-Perkins (*Antiq. Journ.* 29 [1949], 1ff) suggested that a group of larger sets of pendants attached to globes, mounted on similar vertical rods and base-plates, were perhaps fastened to the wooden draught-saddles of the horses that pulled the Great Carriages in which noble ladies rode: the presence of large rivets through the base plates supports this idea. The simpler base of the 'banner' type of ornament might have been fastened to the horse's head-harness straps so that the

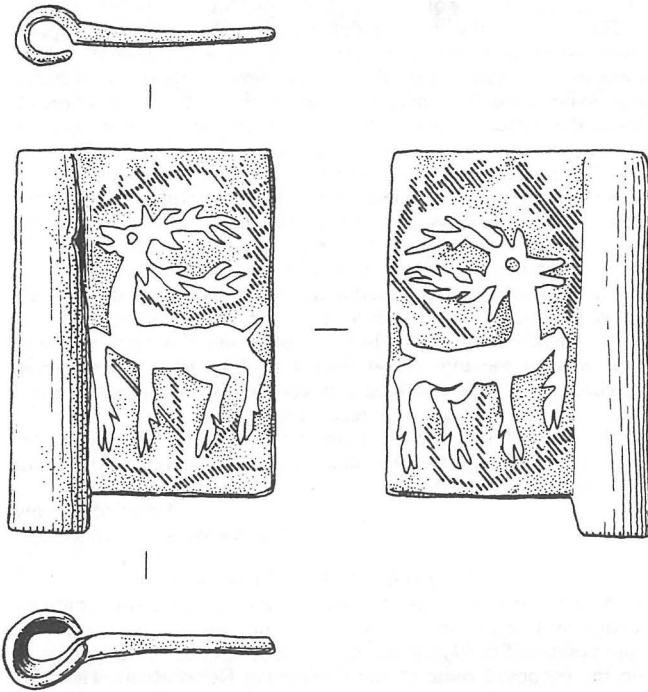


Figure 2. The medieval 'banner' harness ornament from Tarrant Rushton, at life size

banner would be free to rotate with the horse's movement.

That these 'banners' formed parts of sets incorporating pendants is suggested by the discovery of a banner and pendant together in a pit at Old Sarum Castle (*Proc. Soc. Antiquaries*, 2nd series, 23 [1911], 514-5).

The decoration of the Tarrant Rushton 'banner' is unusual; as with the pendants, decoration takes many forms, heraldic, religious, folk-tale elements and representations (e.g. the Peacock representing pride and self-importance) all occur on these objects.

In the 14th century, the White Hart was the badge of Richard II; however it was usually shown 'lodged' and crowned and chained. In this case, the Stag and foliage may represent the hunting tastes of the original owner. In this connection, it is interesting to note the presence of a Deer-Park at Tarrant Rushton at the end of the 13th century (*PDNHAS* 83 [1961], 109 ff.)

Nick Griffiths

MEDIEVAL FLOOR-TILE FROM SHAFTESBURY

Mrs J. Rutter has submitted a fragment of inlaid medieval floor-tile for identification. It was found behind the Methodist Chapel (ST 86282309), in the demolition debris of the boundary wall between 6 and 8 Parsons Pool. The tile is decorated with Emden design 85 (A.B. Emden, *Medieval Decorated Tiles in Dorset* [1977]), a design not previously recorded for Shaftesbury.

Laurence Keen

WINTERBOURNE REW, MARTINSTOWN

Earthworks in Hanging Meadow, east of Rew Manor (SY 641893), were surveyed during the course of a weekend school, directed by James Bond on behalf of Bristol University Department of Extra-Mural Studies (fig. 3). The site comprised a long narrow field of 2 hectares facing south-south-west, rising steeply above the South Winterbourne from c. 84 m-92 m O.D. A row of nine roughly rectangular crofts enclosed by banks and terraces was recorded, varying in size from 50 m x 18 m down to 18 m x 20 m. The earthworks were best preserved towards the east end of the site, where a hollow-way along the top of the slope marked the line of the predecessor of the present road from Martinstown to Winterbourne Steepleton. Possible building platforms were observed in two of the crofts, but could not be identified with complete confidence. A second, more prominent hollow-way descended to the stream along the flank of a tributary valley immediately beyond the west end of the field. A small area of earthworks was observed extending into the next field to the west, but could not be surveyed in the time available. The name Rew, first documented in the 13th century, implies that the settlement consisted of a long row of crofts, as was surveyed; similar linear arrangements have been recorded in other Dorset chalk valleys, e.g. at Winterbourne Steepleton and at Philipston in Winterborne Clenston. An estate map of 1768 shows the settlement entirely deserted and the field boundaries very similar to the present pattern.

C. J. Bond

LODGE FARM AND BADBURY PARK, PAMPHILL

In August 1989 further archaeological work was necessary within Lodge Farm, a late 14th century hunting lodge (ST 97430215).

Samples taken from the southern ground floor room revealed a heavy concentration of chloride salts. This seems to be the result of the room having been used for meat-curing. The salt concentration has made the room damp and has caused the medieval plaster to begin cracking from the walls. Part of the architect's solution was to lower the floor by 0.3 m and replace the salt saturated soil with gravel and sand.

The removal of this soil revealed a series of floor surfaces dating from the 14th to 18th centuries. Purbeck limestone flagstones were bedded on a sand containing 18th-century material. This covered two converging trenches forming a 'Y'-shaped plan and containing culverts constructed of re-used limestone slates and bricks. A circle of bricks at the north-west end of the feature indicated the position of a sink. The north-east and southern ends of the feature cut the outside walls of the building. Clay tobacco pipe bowls, found in the filling of the culvert, indicate an early 18th century date for its construction.

The culvert trenches cut through two 17th-century clay floors. An earlier floor of mortar and clay tiles had been cut away to lay the 17th-century floors. The mortar floor survived where it was bonded to the Lodge walls and may be a remnant of the original medieval floor, which covered medieval deposits containing 14th-century pottery and numerous fragments of mortar and clay tiles.

A length of wall 0.9 m long, 0.3 m wide and 0.2 m deep was located below these deposits. It was constructed of limestone, mortar and clay tiles, but was cut by the foundation trench and the culvert trench. 14th-century pottery was found within a layer of debris above this fragment of wall.

Part of the large medieval ditch excavated in 1986 (Keen & Pap-

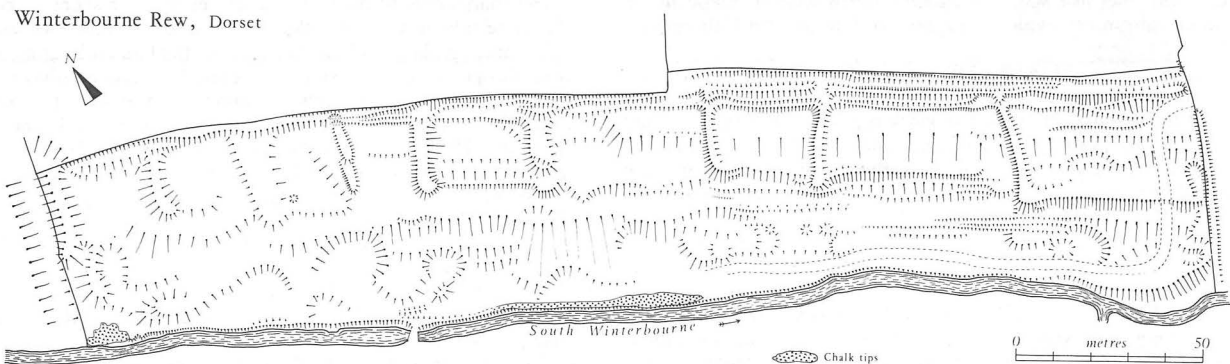


Figure 3. The earthworks in Hanging Meadow, Winterbourne Rew, Martinstown.

From these accounts it is clear that there were two deer-parks within the Kingston Lacy Manor during the 14th and 15th century. Badbury Park, the park associated with Lodge Farm, is probably the Kingston Lacy Park mentioned in 1348 (Cantor and Wilson 1969, 204), which is the earliest known reference. At this time deer, pheasants, rabbits, hares and partridges were taken from the park.

Hutchins (1863, 177) describe a warren on the east side of Badbury which was enclosed in 1740. It seems likely that Badbury Park and Badbury Warren occupied the same area of land. This is indicated by a map dated July 22nd 1742 (D/BKL) (Figure 4.). A red line surrounds the area described as 'the new inclosures on Badbury Warren' it also surrounds Lodge Farm, then known as Badbury Lodge, Badbury Lodge lies in the south-east corner of the Warren close to the boundary of the present Kingston Lacy Park. In the medieval accounts Badbury Lodge is described as part of Badbury Park. Land boundaries still surround the 1742 extent of the Warren but the only surviving length of ditch which could be associated with a deer-park is a 500 m length measuring 3 m wide and 1 m deep with remains of a bank on the east side. This lies on the edge of Pits Copse (ST 97500284).

Field-names within this block of land are Lodge Field, Deer Hill Field, Watch House Field and Hare Run Field. The 1742 map shows the Kingston Lacy open fields lying beyond narrow tracts of downland to the east and south of the Warren boundary. The western boundary coincides with the Shapwick parish boundary and the northern boundary is also the manor boundary.

Thanks are due to Paul Spoerry for examining the medieval pottery; Jo Draper for examining the post-medieval pottery and to Sarah Bridges for translating the medieval documents.

Martin Papworth
The National Trust

Dorset Record Office, Bankes Archives, CG3/3. Kingston Lacy Accounts. 1391-1392.

Dorset Record Office, Bankes Archives, Plan of Kingston Lacy, 1742.

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WELL AT MILTON ABBAS

In February 1989, during the construction of new toilets in the rear extension to the School-master's House of Milton Abbas School (ST 8083 0199) a well was reported. It was 1 m in diameter, enlarging to 1.20 m on the north side as the result of bucket and rope wear – grooves worn by bucket-ropes were very visible. Beneath four to five courses of brick (of the same type as that used in the School buildings) the rest of the well was steyned to its full depth, said to be 25 m. No dating evidence was retrieved. The well would appear however, to be earlier than the School, because of the additional brick courses. If of medieval date its position is strange since the medieval village of Milton lies to the south of the abbey.

Laurence Keen

WILKSWOOD FARM, LANGTON MATRAVERS

Mr Loudon of Wilkswood Farm has uncovered a large well 2 m in diameter which is lined with dry-stone Purbeck marble (SY 9863 7957). The well was filled with oil drums to a depth of 5 m.

After examining this feature the writer was shown a window in the west wall of the farmhouse which has recently been unblocked from the inside. Externally it appears to be a small 16th or 17th century window which was later blocked. Internally the splay for a medieval single light window is now evident. This window splay is part of the original construction of the wall.

The wall is almost certainly part of Wilkswood Priory which is frequently mentioned in documents of the 14th-16th centuries (Mills 1986, p. 36).

Martin Papworth
The National Trust

Mills, A. D., 1986, *The Place Names of Dorset*, pt. 1.

A LATE MEDIEVAL SILVER RING FROM PORTESHAM

Silver ring, found by Donald Wales, 26 November 1989, at Friar Waddon Farm (SY 64359). The band is c. 1 mm thick and 4 mm wide: the ring has an internal diameter of 12 mm. The outside face has 21 slightly concave facets containing the continuous legend

+AVEMARIAGRATIAPLENA;

The letters are not punched – numerous smooth undulations in each letter suggest that they were individually cut. The letter-forms would seem to imply a sixteenth-century date. The legend is common on medieval rings and implies a devotional use.

Laurence Keen

CORFE CASTLE EXCAVATIONS 1989. INTERIM REPORT

The length of curtain wall between the third and fourth towers on the west side of the Outer Bailey has been cleared of vegetation and demolition rubble. The interior wall face and pre-1646 ground levels are now visible.

In the third tower, a floor of pitched limestone has been uncovered. This appears to be an 18th-19th century feature, as does the foundation of a wall which blocks the east side of the tower. A doorway in this wall is marked by two stone-cut mortices approached by a pitched stone path.

An area of the pitched stone floor 1.5 m by 1.5 m was traced at 1:1 and lifted. Excavation of this area revealed that in the arrow-loop embrasures the pitched stone floor rested on the 13th century floor level. A step down from the south-east embrasure was uncovered, abutted by the remains of a second floor of pitched limestone. Below this was a second step at an occupation level containing numerous finds characteristic of the 1640s. This lay above a flagstone floor.

In the fourth tower a series of mortar surfaces had been laid and these had been badly damaged during the demolition of the castle. As in the third tower the interior of the tower had been raised to the level of the embrasure floors and this had obscured the curved archers' steps which were part of the original 13th-century design. In the fourth tower this work took place much earlier, probably in the 14th or 15th centuries.

In the West Bailey part of the track from the Inner Ward to the South-West Gatehouse was uncovered. The new pitched stone pathway is being laid on top of this 1640s level.

Cutting the track from below a 17th century layer of limestone fragments was a steeply sloping path which leads through the curtain wall between the South Tower and the South-West Gatehouse. The cutting for the path is revetted by mortared limestone walls but this is rougher work than the fine ashlar of the curtain wall which it abutts. The feature seems to have been abandoned and backfilled in the 16th century. It is probably the remains of a small postern gate.

This work was carried out with the help of National Trust Acorn volunteers, supervised by Nancy Grace with grant aid from HBMC.

David Thackray and Martin Papworth
The National Trust

WINTERBORNE CAME AND PIDDLTRENTHIDE PARISH CHURCHES

Following redundancy, St. Peter's, Winterborne Came, was vested in the Redundant Churches Fund in 1989. Repairs to the structure and the provision of a new drainage scheme are in hand. In July 1989 the boiler house, to the west of the seventeenth-century north porch, was demolished, with the intention that the pit below ground level should be filled in and the ground level reinstated. The pit is 1.25 m north-south and 1.70 m east-west. It is brick-lined: the east face has seven courses of bricks underpinning the west wall of the porch immediately below the bottom course of masonry, which has a small chamfer. The south side has an offset of 100 to 130 mm, level with the chamfer of the porch. The offset marks the beginning of the foundations of the north wall of the church which are 1.10 m deep and constructed of roughly-coursed stone blocks in mortar. The bottom 400 m of the foundation has a cement render. The pit is 1.30 m deep.

A new drainage trench against the north-east corner of the chancel of All Saints, Piddletrenthide, exposed the junction of the foundations of the north vestry with those of the chancel. Beneath ground level the east face of a northern chancel buttress was revealed, 450 mm high and 40 mm back from the outer face of the vestry. This demonstrates that the vestry is an addition to the chancel and is not of the same build as implied previously (RCHM (E), *Dorset*, iii (1979), 213).

Laurence Keen

WOOLCOMBE

Survey

Two earthwork sites near the head of the Woolcombe valley were surveyed during 1989. Site 10 (SY 55129512) is a scarped and banked enclosure cut by a terrace way, of uncertain date but still

used as a farm track. In the autumn of 1989 lighting and crop-growth conditions combined to show clearly the badly eroded scarps of 'celtic' fields in the area to the S and E. (This area, around SY 551550, was identified as Site 17 in the original survey of Woolcombe Farm: Hunt 1984, Fig 17 and Table 2).

Viewed in this context Site 10 is now plainly seen as the only well-preserved survivor of this group of 'celtic' fields. Other slight scarps in this area may be part of the same field system. During July a small-scale sampling excavation was carried out at Site 10, and this will be summarised in a later section of this report.

Site 11 (SY 55019517) was also surveyed and sampled. This is a slight curved bank, cut by a quarry to the E and extending into a neighbouring field to the W where ploughing has removed any surface traces. Casual fieldwalking during the autumn yielded no artefacts in this ploughed area, but a resistivity survey was carried out and the results of this were being processed as this report was written. The results of a small-scale sampling exercise were inconclusive (see below).

Plans of the earthworks and excavation trenches in the Lower Bottom were selectively resurveyed.

Historical Research

Decennial census returns made for Woolcombe Farm between 1841 and 1881 are being transcribed and studied. They show the development of the household and the farm work-force during the heyday of the Gale family, the last tenants of the Binghamts at Woolcombe.

The more recent history of the farm, and the development of the house and farm buildings, have been greatly illuminated by Mrs Doris Hunt, who with her late husband owned and farmed Woolcombe in the late 1940s and 1950s. Mrs Hunt has given notes, photographs, annotated drawings and a tape-recorded interview, all of immense value. The material is being studied at present, and will be reported at length in the future.

Observation and Salvage

A water pipe trench was dug from the stream uphill to a former dairy building on the sloping ground S of the farmhouse. On the slope the trench section showed only a loamy soil profile, but on the valley floor, beside the pond, a more complex stratification was noted. This part of the trench was cleaned and recorded as PTIII. It was not dug to the natural gault clay, but the earliest feature recorded was a late medieval metallated surface lying at the east margin of the pond. This was remarkably similar to the pond and metallated yard arrangement noted a little to the S in Subsite IV, and confirms the view that the present pond is a truncated remnant of a large late-medieval cattle watering pond which lay within a late-medieval stockyard.

Excavation

As in previous seasons our effort was concentrated mainly in an area of settlement earthworks in the field named Lower Bottom, to the SW of the farmhouse. Here the late George Rybot excavated in the 1960s, and our present strategy is greatly influenced by his work and the need to complete it. (Earlier work is summarised in previous notes listed below, and a plan of earthworks and excavation trenches in Lower Bottom is given in Hunt 1987, Fig. 13, and 1989, Fig. 1). Very good progress was made in 1989, helped by excellent weather conditions.

Sampling of unexcavated areas

Two water pipe trenches (PTI and PTII) run down the valley. By recording their sections we are gradually building up invaluable transect samples of archaeological features and soil profiles in the valley, with minimal disturbance. Both trenches were extended to the N in 1989. PTI, in the valley bottom, demonstrated a widening of the metallated roadway, which when compared to the excavated road surface in IXB, and the plan of the earthworks in this area, showed that the road forked at this point. A branch headed NW from the main alignment and seems to have joined the hollow-way surviving as an earthwork in the NW corner of the field. This road junction also helps to explain why the row of structures, demonstrated variously by excavations and earthworks, is interrupted at this point. Fig. 5B shows our current interpretation of these later 13th-century features.

This pipe trench also showed a pit sealed below the street and containing pottery of the 12th century. This continues to reinforce the pattern of earlier settlement features lying uncomfortably beneath structures of the planned later 13th-century hamlet.

PTII runs along the W slope of the valley. The re-excavated sec-

tion was also extended to the N and further evidence of stone structures was recorded. These structures were not dated but the stratification suggests that they also are earlier than the later 13th-century hamlet.

Re-excavation of George Rybot's trenches

This process is now almost complete. In 1989 his long and narrow trench across the valley contours, in the area we have called **Subsite IX**, was reopened and the limits of his work defined. At its lower (E) end his trench cut across the main road's NW branch. Flanking this was a substantial bank of soil and stones, which does not appear beside the road further S, and which therefore seems to enclose an irregular area in the NW part of the later 13th-century hamlet. This enclosed area is not yet defined clearly, although at least a part of it was a metallated yard, since the upper part of this trench shows a continuous compacted stony surface, but of a rather lighter character than the heavier metallating of the road and the yards found in Subsite VII.

Here also there is evidence of earlier stone structures – or at least rubble from their demolition – but the excavated area may have to be extended before these are clearly defined.

Excavation of undisturbed areas

In **Subsite VIIN** the re-excavation of old trenches is complete and the dissection of undisturbed deposits and structures is well under way. Work in 1989 centred on two areas needing clarification: the sequence of road metallating layers and earlier features, and a series of overlapping layers of rich soil (probably midden material) and metallating to the N of a small cottage EB1. The cottage, road and metallated yards are all parts of the later 13th century hamlet. In the former case a small 'island' of street metallating isolated by earlier trenches was cleared. It resolved into identifiable layers of metallating material, and these seemed likely to be construction features rather than repairs. Apparently the road was very carefully, as well as solidly, built; the cost and effort invested might seem disproportionate in a small and remote hamlet. To the N of the cottage EB1 the metallated yard now seems to run over the midden deposit, but it may be impossible to determine whether this midden predates the cottage, or whether the area around it was reorganised during its occupation, because an earlier trench cuts through the critical area. At all events the way now seems clear for a more rapid excavation of the street and the yard/midden area in 1990.

Other sites

Our programme of excavations and surveys is designed to explore a wider range of settlement and land use development at Woolcombe, and to evaluate the archaeology and historic landscape of the farm. Two very small sampling excavations were carried out in 1989, on Sites 10 and 11. These earthwork sites are briefly described above. At Site 10, the only surviving 'celtic' field of a larger group now almost ploughed out, the boundary bank was eroded at the point where a farm track crossed it. The eroded area was cut back to provide a section, thus reducing fresh damage to a minimum. Beyond the soil and gravel construction of the bank no other features were noted and no artefacts were recovered.

Site 11 is a curvilinear earthwork, and again seems to be the only surface survival of a larger feature or complex. Here a small trench was cut at a point where a ditch might run outside the curved bank, but no ditch was present. This trench might well be extended in 1990 to see whether a ditch is separated from the bank by a berm. The soil cover was deeper than might be expected on a site assumed to be unploughed, raising the question whether some ploughing has taken place here. If so, this earthwork might once have been quite substantial. No dating evidence was found, but the general appearance and siting of the earthwork suggests a pre-historic rather than a later date.

Summary: Development of the Medieval and post-Medieval settlement

Fig. 5 has been drawn to summarise our present understanding of Woolcombe's medieval and later history, and as an exercise designed to stimulate further questions. It is based on the work of the Austin family and George Rybot, as well as the writer's more recent research (Hunt 1984; 1985; 1986; 1987; 1988). The history of the settlement since c. 1100 is divided into five broad periods.

The length of **Period A** is unknown; it is a conflation of all medieval excavated features predating Period B. It cannot be described in any detail because many features are still sealed by later deposits, but some aspects are already clear. Timber and stone buildings were present, but were not necessarily contemporary

with each other. There was quarrying for material suitable for making cob; drains were dug and pits were used to dispose of rubbish, even if this was not their primary purpose. The structural evidence traced so far is scattered across the valley slopes and bottom, and no clear plan can be recognised. This period – or at least the latest division of it – came to an end very shortly before the Period B settlement was laid out, and substantial burning seems to have been involved.

Period B is dated to the later 13th century. A small settlement was formally laid out over the remains of earlier settlement features. A well-built metalled road was flanked on the W side by a row of small buildings, four of which can be demonstrated on the basis of earthworks and excavations. Building EB1, in Subsite VIIN, is the most completely excavated example: a well-built but very small cottage, with an open-fronted agricultural building

adjoining it to the S. Its neighbour to the N (EB3) has been exposed only in part but it was on the same alignment and of similar construction. A metalled yard lay between and behind these buildings, but there was no sign of a dividing boundary. This absence is of great importance. Neither earthworks nor excavations show any sign of curtilage boundaries around the buildings of this period. This arrangement looks very much like a row of farm cottages laid out along a road at the edge of a large farmyard, rather than a conventional hamlet grouping of individual holdings.

On the E side of the street was a large embanked garden, while to the N was a fishpond. Beyond this was a larger house with stone foundations built on a very substantial platform in an otherwise low-lying and wet area.

This combination of a substantial house, fishpond, garden, farmyard and dependent cottages was the product of considerable

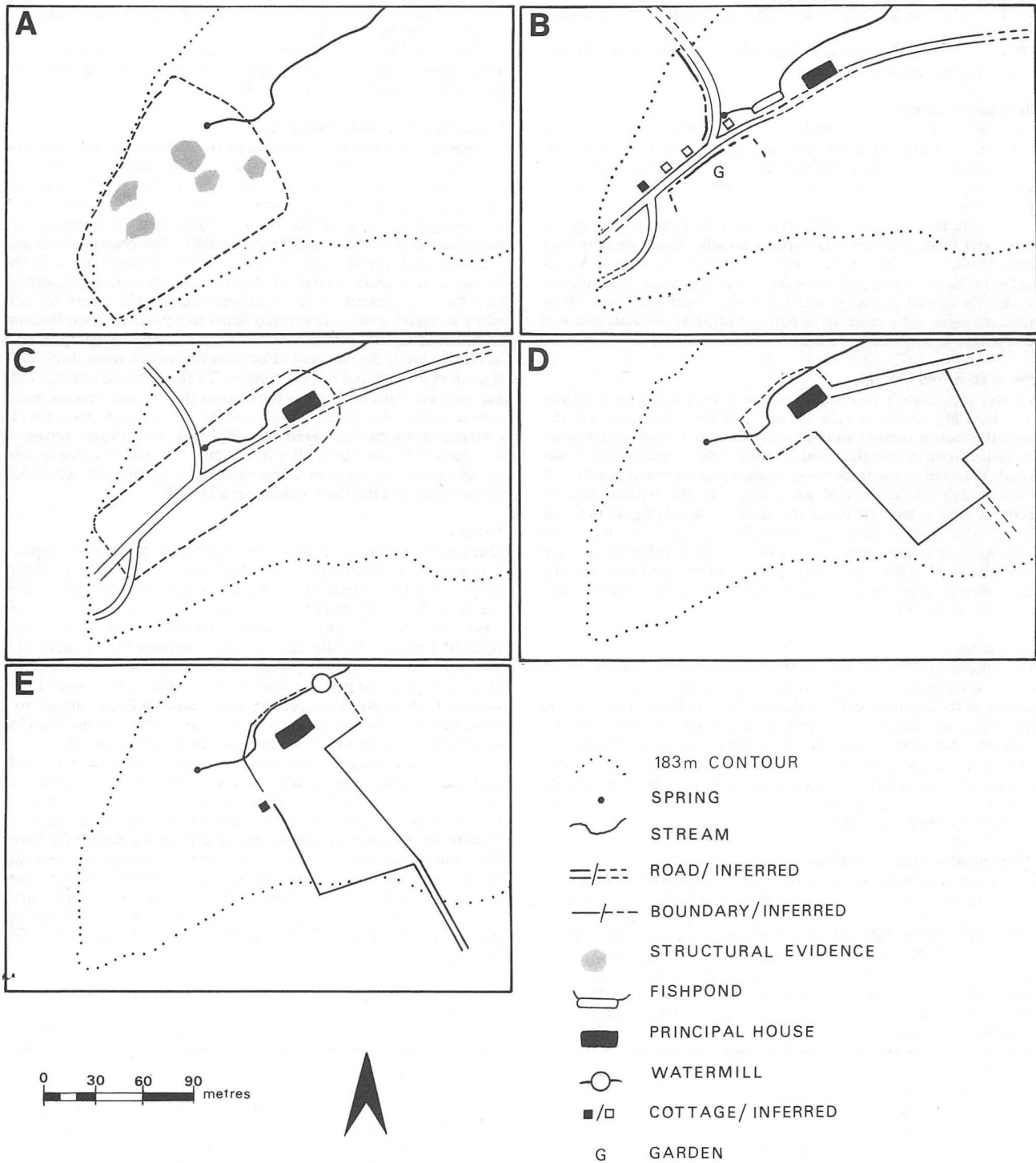


Figure 5. Woolcombe: medieval and post-medieval settlement development. A: c.1100-c.1260. B: later 13th and early 14th centuries. C: later 14th and 15th centuries. D: 16th and 17th centuries. E: 18th and 19th centuries. (Drawn by Jenny Yates).

investment. Robert de Bingham, the younger son of a knightly family from Somerset, acquired Woolcombe by c. 1265, and documentary evidence suggests that he took some particular interest in this rather remote part of his larger estate. In particular he was a verderer of Powerstock Forest, and would need a house in this area from which he could fulfil his duties. The archaeological dating evidence from Period B is consistent with the dates of Robert's lordship, from c. 1265 to 1295 or 1303, and indeed only someone of Robert's status or above would be able to invest capital on such a scale as the excavated features demonstrate. This scale of activity is also consistent with manorial status, which Woolcombe acquired during Robert I's lordship and retained in a legal sense for some time.

It is reasonable to conclude, then, that Robert was responsible for Period B. An extent made in 1303, after Robert's death or that of his son Robert, confirms that a settlement on this scale was in place, and mentions several resources which harmonise closely with the excavated evidence: a capital messuage, a garden and four cottage tenancies. Later documentary evidence, which cannot be set out in detail here, points strongly towards abandonment of some or all of the arable, and the loss of the cottage tenants, between 1317 and 1334. The Bingham's evidently lost their close personal interest in Woolcombe early in the 14th century, and the farm seems to have been tenanted from this time onwards, even if the list of tenants is still incomplete. The 'waste and destruction' of 1317-1334 was attributed by the Bingham's to an early tenant, one John Musket. (He lived at Winterborne St Martin and may also have had little personal concern for the farm except as a resource). Archaeological evidence suggests that the S part of the Period B settlement – the formally laid-out hamlet – was abandoned in the first half of the 14th century. This historical and archaeological evidence seems to be giving two views of the same process, in which pastoralism supplanted arable and labouring tenants were no longer necessary.

Period C began when the period B hamlet was depopulated and modified to serve solely as a farmyard. Following the departure of the cottage tenants the cottage EB1 seems to have remained standing as a ruin, possibly serving as a farm building. The garden passed out of cultivation and the fishpond was levelled and replaced by a large cattle pond. The street and yard surfaces remained in active use, but there is no evidence for an enclosing boundary during this period. Even so the large yards and the pond, coupled with documentary evidence suggesting a decline in the arable, indicate that pastoral farming was particularly significant at this time, with an emphasis on cattle.

This farmyard seems to have passed out of use when the farm was entirely replanned and the Period D farmstead built, probably in the 16th century. An obscure but bizarre incident occurred in the latter years of its use, and perhaps after it had been finally abandoned. A broken late-medieval or 16th-century shackle – part of a pair of manacles – was concealed in a small pit among the ruined buildings, presumably by an escaped prisoner since the shackle appears to have been deliberately forced.

At some stage in this period the principal house – Robert's manor house, and a precursor of the present farmhouse – was demolished and rebuilt on a different alignment, but the present evidence does not support a closer date for this event.

Period D saw the farmstead dramatically remodelled. The old manor house was replaced by a more modest farmhouse, part of which remains as the SW end of the present house. The old farmyard and the road to the SW were abandoned and the land reverted to permanent pasture. The road to the NE, running down the valley towards Toller Porcorum, remained in use and on the S side of this road a range of farm buildings appeared. They included at least one very substantial building, probably a barn. Earthwork remains of these buildings, and the farmstead bank or wall surrounding them, are well preserved in the field called Barns Mead and in the old orchard adjoining it. A slight hollow-way leading SE from this earthwork enclosure may represent a new road giving access to the farm. The changing road layout indicates that Woolcombe was becoming differently integrated into the local pattern of roads and communications.

This new arrangement took shape in the 16th century, and the new farmstead plan lasted until c. 1700. In the later 17th century, probably in the 1650's or 1660's, the farmhouse was partly rebuilt or extended on a slightly more elaborate scale. Documentary evidence for this period is sparse, and it is not yet clear who was responsible for the Period D developments, in what circumstances.

Period E again represents several developments spanning up to 150 years, but the period was given its initial character by the build-

ing of a new walled farmstead beside the Period D enclosure, but on the same alignment, around 1700. Several structures of this period survive: a threshing barn and a range of cattle housing, perhaps some other minor buildings, and much of the boundary wall. A new road or track was built giving access in the SE corner, and this track has also continued in use to the present.

This new enclosed farmstead was not the only evidence of renewed investment at Woolcombe in the 18th century. In the early part of the century the farmhouse was raised from one-and-a-half to two storeys, and later it was given a symmetrical brick facade. Arable and dairying seem to have been important at this stage, if not in Period D, and the increasing significance of cereal cultivation was confirmed by the construction of a small undershot watermill to the N of the farmhouse, probably in the early 19th century. This may have been the work of the Buck family, yeoman tenants of Woolcombe in the late 18th and early 19th centuries. Also in the 19th century the house was further extended to the rear. A cottage, later extended to form two cottages, was built in this period for farmworkers. For much of the 19th century Woolcombe was farmed by the Gales – another prosperous yeoman family – as tenants. In the 1890s it was sold by the Bingham's after some 600 years of ownership.

More detailed reports on the archaeological and historical material are in preparation, and it is hoped that future work will build upon and refine these interim interpretations.

Acknowledgements

My thanks are due as ever to Dinah, Simon and Michael Austin for their unflinching kindness, interest and support. The Dorset Archaeological Committee continued to give financial assistance. I am deeply indebted to my colleagues Paul Spoerry (deputy director; pottery research), Ian Hewitt (finds manager), Dave Brookes (supervisor), Bill Putnam (accommodation; catering; visits), John Beavis (advice on soils; transport), Peter Busby (plant remains), Pam Griffin and Jenny Yates (illustrations; archive management), Graham Dumas (equipment; transport), Angela Heron (cook) and Linda Poulsen (organisation of schools' visits). Students of the Dorset Institute, with others from overseas, and local school students, took part in the excavations. I thank them all for their valuable contributions.

Alan Hunt

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1989 Woolcombe 1988 (Dorset Institute Archaeology Unit: Reports Series).

LOWER KINGCOMBE

Lower Kingcombe (SY 554991) is a shrunken hamlet lying either side of the Hooke valley in the parish of Toller Porcorum. Further archaeological surveys and excavations were carried out in 1989 by the writer with students of the Archaeology Unit at the Dorset Institute. An archaeological framework is suggested in Hunt 1988.

Dairy House Farm (formerly Hoopers Farm; SY 55469923) is a ruined and mainly collapsed cross-passage house, probably of the later 16th century. It was substantially rebuilt in the 18th century, with a W end extension. The remains were cleared in the autumn of 1989 to make way for a new house. When the site was examined, shortly after demolition and after concrete foundations for the new building had been laid, no archaeological features were visible below the former house, nor were any artefacts recovered. The area occupied by the garden of the old farmhouse immediately to the south, appeared as a very dense black soil, suggesting a lengthy period of cultivation.

The ruined house had been archaeologically surveyed in 1988, and samples of the collapsed roof timbers were then selected for removal and examination after the site was cleared. These timbers were removed in November 1989, and will be dendochronologically assessed in due course.

The rubble boundary wall to the west of the house was partly removed and a slight scarp constructed to make a level site for the new house. Below the old boundary wall a stone feature or features appeared, but they were disturbed beyond identification. Nevertheless it was important to note the presence of archaeological features underlying and predating this boundary.

Beech Cottage (SY 55399921) lies towards the western edge of the hamlet, beside a green lane leading south-west from the principal street. Earthworks near the ruined cottage suggest that it is the only survivor of a small group of buildings flanking this abandoned

road. The cottage, on a 3-room plan, was last occupied about 30 years ago and is very ruinous; the west end has entirely collapsed and the building is beyond restoration.

The standing remains were surveyed in the spring of 1989, and in the summer the subsurface potential of the site was assessed by small-scale excavations. Test pits were dug in the garden to the north of the cottage, reaching natural but showing no archaeological features. Considerable quantities of medieval and post-medieval pottery were recovered, however. In the ruined house a trench was opened to test the deposits below the modern concrete floor. The floor surface of a cross-passage was clearly visible, with differing floors in the rooms to either side. This passage was aligned with a doorway in the south wall. Plaster was removed from the north wall revealing a blocked doorway opposite. It appears that a 3-room, single-storied cross-passage house was built on the site in the late or sub-medieval periods, and was remodelled in the later 18th century. This rebuilding included raising the house to one-and-a-half stories and building a new front wall in a more fashionably symmetrical style. A chimney stack and bread oven were built in the east wall, but this evidently proved weak because at a later date, probably in the 19th century, the upper part of the wall and stack were rebuilt and a pair of brick buttresses added.

My thanks are due to Mr and Mrs J. M. Wilson and Mr and Mrs P. Westgate for permission to investigate these sites, and to students of the Dorset Institute who took part in this work.

Alan Hunt

Hunt, A. M., 1988, *Lower Kingcombe: an archaeological survey and evaluation* (Dorset Institute Archaeology Unit: Reports Series).

WIMBORNE MINSTER, WIMBORNE

Watching-Brief Summary Report for 1988/9

During a scheme to re-pave, build a low retaining wall along the edge of the graveyard and improve drainage around the south and west sides of Wimborne Minster, a watching-brief was carried out to monitor all excavated remains (SZ 009999). The primary area of concern was the relatively deep excavation of the footing trenches and the drains both along the south side. However, most of the ground on both sides was heavily disturbed, in the 19th and 20th centuries, and no *in situ* undisturbed early archaeological deposits were observed. Fragmentary human remains occurred along the south side, with occasional fragments of coffin fittings of earlier 19th-century date, but no intact burials were disturbed. All human bone was reburied.

The work was carried out by N. Adam, D. E. Farwell and S. M. Davies, and the project was commissioned and financed by East Dorset District Council.

Susan M. Davies
Trust for Wessex Archaeology

17TH CENTURY KILN AT HORTON

During August and September 1989 further trial trenches were dug in order to establish if any remains of the kiln structure could be traced.

Two trenches were opened, one being adjacent to trial trenches excavated in 1988 by The Dorset Institute of Education and a second trench to the north (SU 03150753). This second trench revealed brick work *in situ* and was extended to uncover the entrance of a flue.

Large quantities of pottery and kiln material were recorded (see comparable material already recorded [Copland Griffiths this volume]). It is hoped to investigate this site further in the spring of 1990.

Penny Copland-Griffiths

CROCKERFORD, FIFEHEAD MAGDALEN

In an article entitled 'Documentary and Other Evidence for Medieval and Post-medieval Ceramic Production in Dorset' by P. Spoerry with V. Hart, of the Dorset Institute Archaeology Unit, (*D.N.H.A.S. Proceedings*, Vol. 110, 1988), reference is made to Crockerford in the parish of Fifehead Magdalen, as recorded by Hutchins in 1870 (Hutchins 1870, 58), which could not, however, be further identified. In fact this detached part of Fifehead Magdalen is in Somerset.

'His land at Cokerford at Yeovil' was granted by Nicholas Fitz Robert Fitz Harding to the Abbey of St. Augustine, Bristol by charter (undated), and continued in the hands of the Abbey until the Dissolution in 1539, when it was appropriated by Henry VIII as an endowment of the new Bishopric of Bristol. In the Court Roll it was known as Key or Keyford and contained 20 ac of land, with a

mill, at the southern extremity of the parish of Yeovil, on a stream separating it from East Coker (Batten 1897, 290-1). The tenants were paying rent for the land and mill to the Abbey in 1491-2 (Sabin [ed.], 1960, 61-2).

This detached part of the estate was described in a survey of the manor of Fifehead Magdalen in 1814 as two copyholds (Dorset Record Office D1/10334 1814) and is shown on a map of Fifehead Magdalen in 1833 as land at Key in the parish of Yeovil, Somerset (Somerset Record Office DD/BT/19/20 1833).

The site of Keyford is at approximately ST 558132 on the Roman road to Dorchester, (the modern A27). The geological map (Sheet 312, Yeovil, 1:50,000), shows it to lie adjacent to deposits of the Fuller's Earth Clay and the Yeovil Sands.

These details, apart from the geology described above, are already recorded (Ross 1986, 95). (In the same article the grid reference for the Hermitage kiln site is wrong, and should be ST 646067. Jo Thomas)

M. S. Ross

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WHITE MILL, SHAPWICK

During repair work at White Mill (ST 95810062) in March 1989 the structural engineer required three foundation inspection trenches to be excavated. Archaeological observations were made during this work.

The present brick building is late 18th-century with 19th-century additions. The key stone above the mill race bears the date 1776. The building material of the mill race buttress and lower leaf walls is limestone ashlar. The scars of a double undershot waterwheel are visible on the walls of the wheel housing but the wheel was removed in the 19th-century and replaced by an engine. Much of the mill machinery is preserved within the building although the mill went out of use in 1885.

The mill is probably mentioned in Domesday as part of a large royal manor but is first named as Wytemull in 1341 (Mills 1980, 178). It is frequently mentioned in documents up to the present century.

Two of the inspection trenches were excavated against external brick walls and revealed nothing of note. The third trench (2.1 m by 0.6 m) was excavated against a length of wall on the south-west side of the mill house. This wall appeared to be a survival from an earlier building as it was the only part of White Mill constructed of heathstone. This appeared once to have been an exterior wall which was later covered in by the construction of a brick outshot.

Below a scree of concrete lay a brick floor and below the bricks was a layer of sand containing creamware and white saltglaze pottery dated to 1780-1800. Below this lay a narrow brick wall 0.23 m wide and 0.23 m deep which abutted the main wall at right angles. This cut a cobbled yard of nodular flints below which was a layer of clay and chalk which continued to the base of the heathstone wall. Verwood and tinglaze pottery from this layer indicated an early 18th century date. The wall extended 0.4 m below ground surface and was built on a clay layer containing pottery which indicated a late 17th- early 18th century date. This covered another layer of clay which was excavated for 1.0 m below ground surface but continued to a greater depth. This layer seems to have been deposited to raise the ground level and contained small fragments of abraded 16th-17th century pottery.

Thanks are due to Jo Draper for examining the pottery from this site.

Martin Papworth
The National Trust

Mills, A. D., *The Place Names of Dorset* pt. 2.

WEYMOUTH AVENUE, FORDINGTON

The construction of a new stadium for Dorchester Town Football Club provided the opportunity to examine an area of 3.15 ha. on the southern outskirts of Dorchester (SY 68658910). Prior to construction the site was used by the Dorchester Rugby Football Club who have now moved to a new ground at Coburg Road. The observations were undertaken during March, April and May 1989 and were financed by the Duchy of Cornwall.

The excavation area lies immediately to the east of the Roman

Road from Dorchester to Radipole, Weymouth (RCHM 1970, 540). No crop or soil marks had been recorded within the excavation area and fieldwalking adjacent to the south of the site, on the route of the Dorchester bypass, had revealed a low level of artefactual material (Woodward, forthcoming). Similarly observations during construction of the bypass had only identified occasional and isolated features along the route to the north and east of Maiden Castle Farm (Woodward and Smith 1987, 86). Geophysical survey in February 1988 had indicated some disturbance and clearly suggested a number of features to be recent in origin, although it was possible that some of the anomalies might represent archaeological features.

Observations during topsoil stripping revealed a number of post medieval or modern features. These included a fenceline indicated on recent O.S. plans, the post settings for two large showrings, used between the 1920s and 60s for the annual Dorchester Agricultural Show, and the cinder foundation for a cricket pitch. The survival of features predating the present rugby pitches and also of colluvial deposits sealing the chalk bedrock indicated that the site had not been severely eroded or landscaped prior to the present observa-

tions. The absence of archaeological deposits mirrors the results of the fieldwalking and observations south of and adjacent to the site and therefore provides an additional element to an apparent blank area of prehistoric deposits to the east of Maiden Castle Farm and west of Conygar Hill.

The results of this observation work are being combined with those undertaken in 1988 at the site of the new rugby ground at Coburg Road (Smith 1988, 144), and a full report of both is currently being prepared for publication in the *Dorset Proceedings*.

Roland Smith

Trust for Wessex Archaeology

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Shorter Contributions

TWO ROUND BARROWS AND FLINTWORK ON POUND HILL, WINTERBOURNE STEEPLETON, DORSET

Paul Garwood

In the course of a locational survey¹ of round barrows in south Dorset undertaken by the author and an assistant in September 1988, two previously unrecorded mounds, probably round barrows, were identified on Pound Hill in Winterbourne Steepleton parish (see fig. 1). In addition, an unfinished flint axe and other evidence of flintworking were found on the ploughed surface at the edge of one of the mounds.

The Barrows

The two low mounds as observed in September 1988 (denoted 'a' and 'b' on fig. 1B), were both so deeply ploughed that it is unlikely any part of the original mound structures or old land surfaces have survived undisturbed. From surface inspection the mounds appear to be structurally similar; they are approximately the same size, and the large quantities of unbroken and plough-shattered flint nodules on their surfaces suggest that both probably incorporated flint cairns or cappings. The dimensions of the mounds and the probable flint structures encourage comparison with the excavated sites at Puncknowle (Greenfield 1984).

<i>Barrow 'a'</i>	SY6243 9084	Diameter approximately 10.0–12.0 metres, maximum height approximately 0.5–0.7 metres.
<i>Barrow 'b'</i>	SY 6248 9082	Dimensions similar to 'a'.

The two new mounds are located on an alignment oriented eastwards from round barrow Winterbourne Abbas 9 (close to the summit of the hill) towards Winterbourne Steepleton 48 (see fig. 1B)², which suggests that the barrows on Pound Hill constitute a closely-linked aggregation combining a linear group with outliers, that extends over an area of 350 metres (east-west) by 100 metres (north-south). All the barrow mounds are probably inter-visible, though modern hedges and fence lines obscure direct views, especially for Winterbourne Abbas 9 and 10 in relation to the other barrows. It is also possible that a further low mound exists between Winterbourne Abbas 9 and barrow 'a', although this appeared to be a natural break of slope on inspection in September 1988. Except for a pair of round barrows immediately to the north of Winterbourne Steepleton church, the nearest barrow cluster to the Pound Hill group is the Rew group (Winterbourne St. Martin 1, 2, 2a, 3, 3a, 4, 5; Grinsell 1959), 1200 metres to the south-east, which also has a linear arrangement and outlying mounds.

The Flint Axe and Other Flintwork

The flaked flint axe illustrated in figure 2 was found on the east side of barrow 'b' (at SY 6248 9082, find spot indicated by star in fig. 1B), at the edge of the mound amongst a scatter of flintwork debitage and a few retouched pieces. Only the axe was collected as there were no means available at the time to adequately record the full distribution of the material in detail. It was not possible from surface inspection to define any stratigraphic relationship between the flint artifacts and the mound, especially as the site is so disturbed and spread by ploughing, and because of the peripheral position of the material. The axe and other flintwork, which may represent discarded domestic objects and manufacturing debris, or purposefully-deposited artifacts of ritual significance, could therefore derive from the old land surface and/or pre-barrow features, from a phase of mound construction, or from the mound surface (post-dating the use of the barrow), and as a result of modern plough disturbance could constitute a mixed assemblage drawn from several depositional contexts.

The flaked axe itself is of some interest as it appears to have been discarded in the course of manufacture, although nearly completed. It is made from a mottled bluish-grey/light grey flint, with dark grey and light brownish-grey inclusions, and is 125 mm in length, 70 mm wide, and 44 mm in thickness. The piece is bifacially worked to a near-finished state, but is asymmetrical in profile and retains a large area of cortex on one side. It is possible, given its size, form, and state of completion, that the axe was abandoned because of the realization that further flaking, to remove the cortex and significantly reduce the thickness of one side of the artifact (to balance and thin the form), would result in an overall size reduction incompatible with its intended function. An alternative possibility is that the piece is a rough-out for a small Mesolithic tranchet axe (N. Ashton pers. comm.), though its size and form as it exists is certainly more characteristic of Neolithic and early Bronze Age flaked flint axes.

There are, as far as the author is aware, few contextual parallels in Wessex for such a flaked axe find. In Dorset similar flaked flint axes are known only from a very small number of round barrows: Dorchester 4, Portesham 3, and Wimborne St. Giles 9 (Grinsell 1959), and possibly Chaldon Herring 15 (White 1973, fig. 8.1). The occurrence, however, of various kinds of flintwork assemblage is common at round barrow sites, as any review of recent site reports will demonstrate (for Dorset, for example, see: Greenfield 1984; Horsey and Shackley 1980; White 1972; 1973; White and Reed 1970).

Whatever the date of the axe and the other flintwork, and the relationship of this material to mound 'b', the location of this

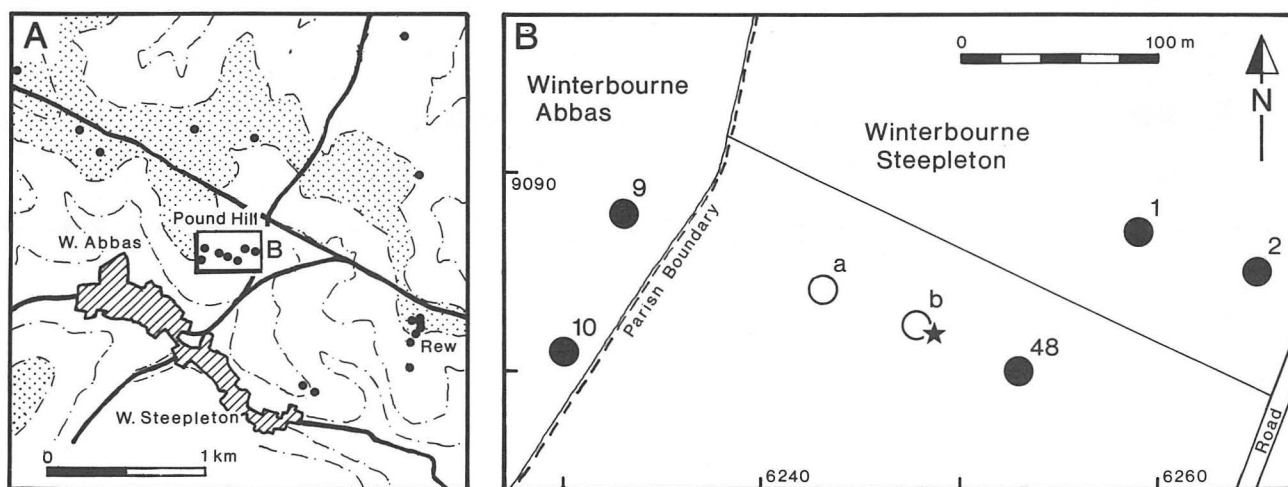


Figure 1. 1A. Location of Pound Hill Barrow Group. Contours at 25 m intervals, land above 150 m OD is stippled. Dots indicate known round barrows sites. 1B. Pound Hill Barrow Group. Previously unrecorded barrows denoted 'a' and 'b' (approximate locations). Star indicates position of flintwork, including find spot of flaked flint axe.

flintwork and apparent unfinished state of the axe raise again the question of the nature and purpose of flintworking episodes and flintwork deposits at round barrow sites. A detailed examination and overview of patterns of flintwork deposition at these sites is certainly long overdue, particularly with regard to the separation of residual 'domestic' assemblages, various kinds of purposeful deposition at different stages in the ritual use of barrow sites, and assemblages of manufacturing debris, whether residual, contemporary with the barrows' use, or discarded after final monument closure or abandonment. In all cases such identifications need to be related to broader inter-related models of flintwork production and exchange, ritual practices, and changing social, economic, and religious schemes. Until this happens and clearer contexts for interpretation are established, the reporting of surface finds from round barrow sites and the description of excavated assemblages will remain inconclusive and disconnected.

NOTES

¹The locational survey undertaken in September 1988 is one of a series of regional surveys (south Dorset, Marlborough Downs, Stonehenge), designed to assess different aspects of round barrow siting in relation to a variety of locational factors: i.e. topographical position; geology and land use; cultural landscape features, etc. The Marlborough Downs and south Dorset surveys are now complete, and the Stonehenge survey will be completed in the course of a final period of fieldwork in 1990.

²Barrow numbers are those in Grinsell's list (Grinsell 1959, 1982).

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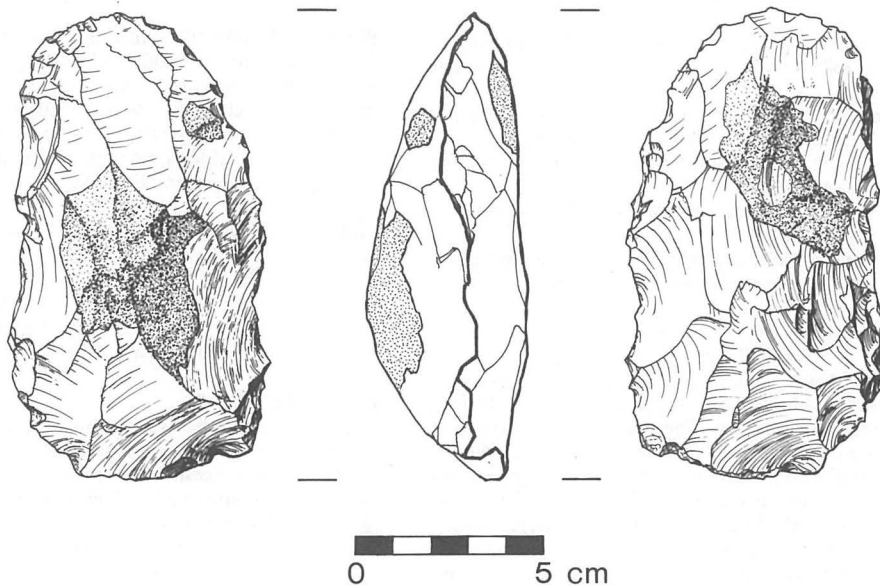


Figure 2. Unfinished flaked flint axe from eastern edge of barrow 'b' at $\frac{1}{2}$ life size. Note asymmetrical profile and areas of cortex (stippled).

OBSERVATIONS ON THE PURBECK TO SOUTHAMPTON PIPELINE

Peter Addison and David Maynard

This note describes isolated archaeological features and finds recorded during the construction of the Purbeck to Southampton pipeline in the spring and summer of 1988. These are in addition to the major excavations reported elsewhere, but do not represent an exhaustive list of all small find spots made on the route of the pipeline. All finds, along with the archive, have been deposited with the Dorset County Museum.

Plot 46.26 SU 04830273 Uddens Park

Early Medieval (12th to 13th century) pottery was recovered overlying, and in the top fill of, a shallow ditch revealed when topsoil was removed for construction. The pottery is similar to material recovered from Purbeck where, the presence of wasters suggests, the kiln site lies (Jo Draper, pers. com.). A further two ditches, containing a small amount of the same pottery were observed in the pipetrench sides. No clear evidence for the continuation of these ditches was found by geophysical survey outside of the easement.

Plot 52.6 ST 98240205 Childbridge Farm

Six pits were observed in the pipetrench sides buried beneath up to 0.40 m of colluvium. Grooved Ware pottery was recovered from pit 6, and worked flint from pits 1 and 2, whilst pits 3, 4 and 5 may be natural, periglacial, features.

Pit 1 0.60 m diameter, 0.35 m deep with sloping sides and an uneven base. Filled with pale/mid brown loam with abundant small chalk grits. Two worked flints, a blade and a scraper, were removed from this pit (Figure 3).

Pit 2 0.60 m diameter, 0.20 m deep with sloping sides and a slightly rounded bottom. Filled with dark/mid brown loam with few chalk grits.

Pit 3 1.05 m diameter, 0.30 m deep with sloping sides and a flat base. Filled with slate grey chalk silt with some chalk lumps.

Pit 4 1.55 m diameter, 0.30 m deep with uneven sloping sides and a slightly rounded base. Similar fill to 3.

Pit 5 0.85 m diameter, 0.30 m deep with uneven sloping sides and an uneven base. Similar fill to 3.

Pit 6 1.30 m diameter, 0.40 deep with sloping sides and a flat base. Filled with mid brown loam with numerous chalk grits.

THE GROOVED WARE POTTERY

David Tomalin

See figure 4. The 40 sherds from site 52.6 appear to represent a minimum of 13 vessels, although the sherds could not be formed into any single vessel reconstruction. The colour, textural qualities and incised technique of the reduced ware (sherds 6.1-6.15, Fig 4.) are all very closely similar to the reconstructed jar from pit 4 in the ring ditch, (Howard this volume). Rim sherds 6.1 and 6.2 indicate, however, a closed form with diagonal incisions associated with a stab and drag-filled zone. This particular combination of decorative motifs is not to be found at Durrington or Mount Pleasant. Like the open splayed form from pit 4, however, it is a feature typical of the Clacton sub-style (Wainwright and Longworth 1971, 237) and it may be compared with sherds embodied in the mound of a

bell barrow at Roundwood in the parish of Laverstoke, Hants (Crawford 1920, pl. 11, nos. 1, 2, 71). Other sherds of reduced ware worthy of note are fragment 6.13, which demonstrates external grooved decoration carried to the very foot of the pot, and fragment 6.14 which is seemingly a detached portion of a vertical cordon. This latter sherd may be more appropriately attributed to the Durrington sub-style in which prominently formed vertical cordons of this type are a notable characteristic (Wainwright and Longworth 1970, 240).

Stylistic features worthy of note in the oxidised ware include the eroded cordon or tongue lug on sherd 6.18 and the herringbone grooving on basal sherd 6.17. The prominence of the plastic decoration on sherd 6.18 and the tell-tale traces of impinging diagonally-scored decoration identify this sherd with the Durrington sub-style (cf *ibid.*, 219-221). Further characteristics of the same style are the spiral or curvilinear grooved motifs which are seemingly represented in fragmentary form by sherds 6.19 to 6.22.

Sherds 6.28 to 6.35 all bear diagonal or converging lines of lightly scored incisions which are reminiscent of a surface treatment known in Beaker Ware. The thinness and hardness of sherds 6.28 and 6.37 proffer a particularly close similarity with this latter ceramic tradition.

RDX 53 ST 97390205 B3582 Blandford to Wimborne road

A ditch, 1.0 m deep and 2.0 m wide was seen in the pipetrench beneath the present road surface at the start of the Beech Avenue. It had been truncated by the road make-up and ran north-west, south-east. A small fragment of possibly Iron Age pottery was recovered from the fill.

Plot 53.4 ST 96900185 South East of Badbury Rings

A ditch of V shaped profile, 1.3 m deep and 2.2 m wide was located by magnetometer and excavated in advance of construction. The fill comprised chalk rubble and chalk silts and the only finds consisted of several waste flakes and a fragment of a possible rotary quernstone. A gridded magnetometer survey over 40 m showed it running in a straight line East-West.

Plot 54.8 ST 95959915 River Stour flood plain

A small pit, buried beneath alluvial gravels, was cut by the pipetrench. The pit had a diameter of 0.80 m, and was 0.40 m deep with sloping sides and a rounded bottom. The fill comprised dark brown sandy soil with small gravel and charcoal flecks and produced several sherds of Early Iron Age pottery.

Plot 54.14 ST 956986

The pipeline here crosses the possible alignment of a Roman road but, despite close examination of the area by the writers, no signs of the road were seen. This is possibly due to the heavy disturbance of the area, immediately adjacent to the modern road, caused by the contractor's plant.

Before construction work started a trial excavation was carried out in this field to examine geophysical anomalies, but these proved to be very deep modern ploughmarks. During this work, however, several worked flints were recovered and during subsequent construction work the following flintwork was collected.

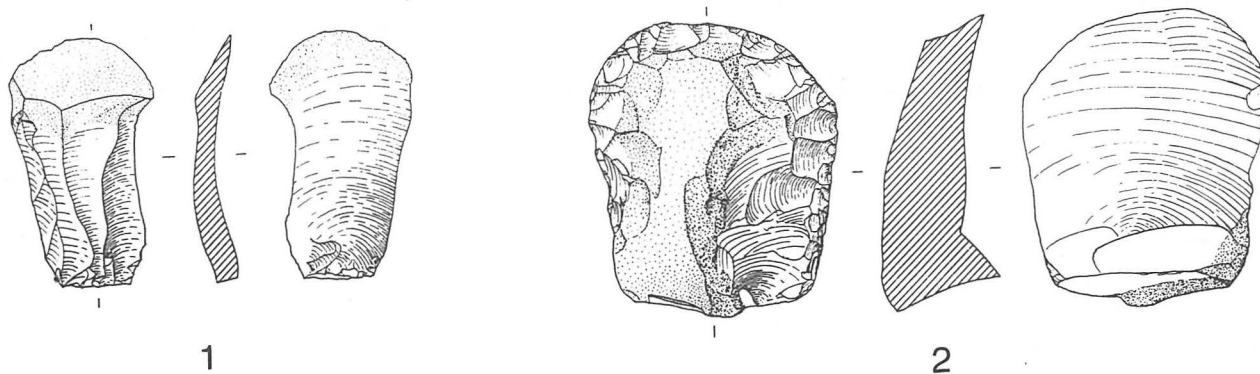


Figure 3. Plot 52.6: The flint, at $\frac{2}{3}$ life size. 1, blade; 2, scraper, both from pit 1.

Waste Flakes	Cores	Scrapers	Retouched Flakes
	125	5	7 6

The flint was all of a dark unpatinated finish and probably derived from the local river gravels. Three flint axes of similar material, one partly polished, were found in a previous year some 400 m west of the pipeline at SY 95259890 by the local farmer, Mr. Chappell of Vines Close Farm who retains them in his possession.

No archaeological features could be distinguished at this stage and it only became apparent later that the deep ploughing had buried and mixed topsoil with the sandy gravel subsoil. During subsequent trenching operations a number of small pits and scoops were revealed in the trench sides. These contained amounts of charcoal but were otherwise free of finds.

At SY 95909908 the major portions of a medieval cooking pot were found.

Plot 55.3 SY 95489822 Henbury Park

Topsoil stripping revealed a band of black soil filling a ditch containing large amounts of pottery. The ditch was shallow with a maximum depth of 0.45 m and had a flat, U shaped, profile. The east side had been buried by a shift in the topsoil, probably associated with the eighteenth century landscaping of the park. The pottery recovered is of eleventh to twelfth century Scratched type and represents five or six vessels: two or three bowls, two cooking pots and a jug.

Plot 56.4 SY 94799729 Combe Almer

At the top of a slope a pit 1.1 m deep and 1.3 m wide was observed cut into the clay subsoil. The fill consisted of a series of black, charcoal-rich, deposits amongst which were a few sherds of Iron Age or Romano British pottery. No other features were found in the locality.

Plot 56.7 SY 93759650 Lytchett Matravers

A section of ditch, first observed in the 8" pipetrench, was excavated by hand along the route of the 16" pipe. This showed it to be 1.7 m wide and 1.9 m deep with very steep sides and a flat bottom cut into the chalk. The fill consisted of a series of layers of loose chalk rubble. A late Bronze Age rim sherd was recovered from the upper fill of the ditch.

Plot 57.1 SY 93469623

A scatter of animal bones and several artefacts were recovered from an area downslope, and to the west of St. Mary's church. The finds came from a discrete area but were not associated with any features. They comprised – one extremely worn silver threepenny bit or groat of Elizabeth, four, worn, bronze farthings of Charles II, minted either between 1672-5 or in 1679 and a copper-alloy belt buckle (Plate 1). The suggested time of loss for the coins and, presumably, the buckle is between *circa* 1700-1710. The buckle is flat, with incised decoration. Part of the central pin arrangement survives. These 'spectacle' buckles are a long-lived type, found from at least as early as the 14th century but continuing into the 18th century.

Plot 59.1 SY 91529310 East of Wareham Forest

A long narrow retouched flake was found after topsoil removal for the pipeline. The flake, 76 mm long and 26 mm wide, showed retouching on both ends and along one side.

Plot 59.2 SY 91459302 East of Wareham Forest

A broken flint axe was found here, 53 mm long and 47 mm wide with a maximum thickness of 23 mm. This was a flaked, unpolished, axe in pale grey flint with a straight cutting edge. I am grateful to Sue Lobb for identifying this object.

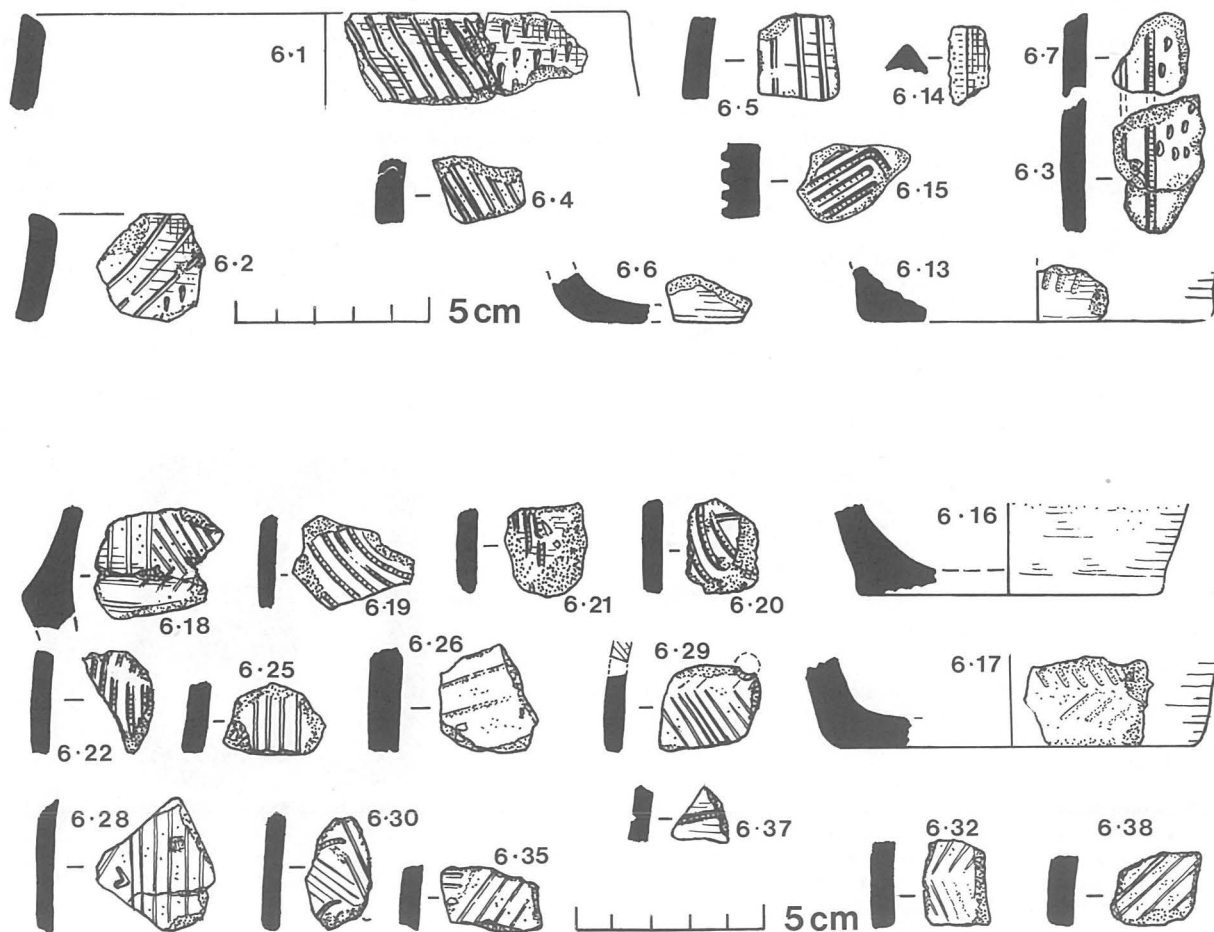


Figure 4. Plot 52.6: The Grooved Ware pottery, at 1/2 life size.

Plot 62.1 SY 89908709 Worgret Dykes, Wareham

In May 1989 the pipeline passed through a section of the Worgret Dykes, after scheduled consent had been received. The pipeline was routed through what appeared to be a disused sand quarry, but some of the earthworks within the easement could have been the remains of dyke structure. A survey of the piperoute and the line of the dykes to the west, which was thickly covered by undergrowth and bushes was completed.

The earthwork survey showed what had previously been seen as a curve in the dyke to the south, was in fact, a terraced trackway leading out of the quarry to the west up the northern side of the ditch and over the northern bank of the dyke. Where the southern dyke bank was crossed by the pipeline easement, it had been broken down and survived if at all, as a slight terrace across the slope.

Topsoil stripping revealed no archaeological features. A small exploratory trench was excavated by hand across the possible line of the dykes, but only undisturbed gravel and clay deposits could be seen. The pipe trenching work was closely watched, but no evidence for the presence of the dyke could be seen, presumably as it had been removed by earlier quarrying activity. The details of the excavation work and the earthwork survey have been deposited in Dorchester County Museum with the other records.

Worgret Manor Farm

The following features were noted between the Dorchester to Wareham road and the river Frome crossing. The pipeline traversed a gravel terrace (through pipeline field numbers or plots 62.2, 63.1 and 63.2) to grid reference SY 90158655. Here it drops down to the flood plain of the Frome through plots 63.3 and 63.4 and then on to 63.8, the site of excavated Roman material (Maynard 1988).

Before construction, no features were known (Barnes and Cox 1987). Plot 63.2 was under a maize stubble and was unsystematically field walked. The majority of attention was paid to the area of the pipeline, but individual worked flints could be picked up all over the field. The results are shown below.

Flakes	Cores	Scrapers
34	3	5

Topsoil moving operations were monitored closely with flint being picked up from the easement before further construction work took place. Objects were picked up within approximate 20 m long collection units, but the results are shown here by the plot totals.

Plot	Waste flakes	Cores	Scrapers	Retouched flakes	Arrow-head
62.2	2			1	
63.1	75	16	8	1	other features
63.2	52	9	6	2	other features
63.3	9	1	2		
63.4	47	4	6	1	1 other features

The majority of flint utilised was of a dark, lightly patinated flint probably of local heath pebble origin, although some comes from a different geology. The scrapers are mostly small, well worked, thumbnail type. A number are worked from a broad flat flake. The projectile point from plot 63.4 is of petit tranchet type made from a greenish chert.

Some archaeological features were observed and excavated where possible. These are described below.

Plot 63.1 SY 90018675.

Two small shallow scoops of amorphous shape. One is possibly of natural origin. The other, larger, was 0.8 m long and 0.2 m deep and contained small amounts of charcoal. No artefacts were associated with these features.

Plot 63.2 SY 90108660.

A spread of burnt flint approximately 2 m in diameter was seen after the topsoil was removed. Due to the flint lying in the route taken by construction traffic, it could not be examined further. A short length of ditch was excavated adjacent to the burnt flint. This

could be traced for about 3 m. The excavated portion was 0.4 m wide and 0.25 m deep with steep sides. The ditch fill was of a dark brown loam mixed with burnt flint. Finds from the ditch were two sherds of pottery identified as being of Bronze Age date by David Tomalin; and flintwork as shown below.

Waste flakes	Cores	Retouched flakes
9	3	1

Plot 63.4 SY 90208645.

Within the flood plain of the Frome are several slightly raised drier portions of gravel and sand surrounded by wetter peat filled zones possibly marking the route of former river channels. One of the drier gravel banks was traversed by the pipeline. Approximately 30 m of this was exposed and all the flints picked up in the plot were recovered from this bank. On the eastern side of the gravel bank a small area of burnt heath stones was examined. Evidence for a ditch or possible gully of natural origin filled with dark grey sand containing worked flint and occasional burnt stone was stratified beneath the spread of burnt stone. The gully opened into a peaty sand-filled wet zone.

Finds included pottery identified as being of Bronze Age date by David Tomalin; several small fragments of worked shale, one, a curved piece, was possibly part of an armlet; and worked flint as shown below.

Waste flakes	Cores	Scrapers
49	7	1

The flint utilised was all of locally derived gravel pebbles. Knapping had taken place on the site as was shown by a core onto which three flakes could be refitted.

The spread of burnt stone continued outside the stripped pipeline easement to the south, where it is possible that there is more evidence of this occupation under permanent pasture.

The construction of the pipeline across this gravel terrace and river flood plain shows evidence of prehistoric occupation probably beginning in the Neolithic and being intensified in the Bronze Age. The use of the gravel bank surrounded by wetter zones is probably a seasonal purpose specific occupation. The gravel terrace has been more intensively used, even if only for seasonal occupation but with some signs of more permanent use.

We are grateful to Jo Draper for commenting on the medieval pottery, and to Paul Munro-Walker for identifying the coins. Thanks also to Mr. and Mrs. Chappell for showing us the flint axes.

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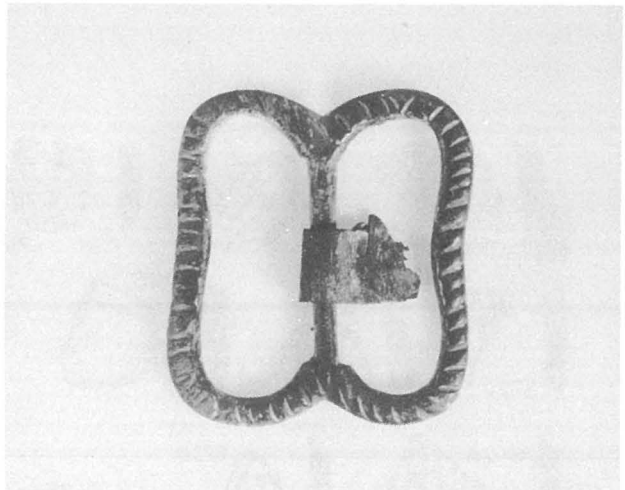


Plate 1. Plot 56.7: Bronze Buckle, at life size. The buckle is flat.

THE SEARCH FOR A SMALL ANGLO SAXON BOUND AT SHAFTESBURY

Jan Rutter

The Charter

In the year 958 A.D. King Eadwig the English King gave a piece of land at Shaftesbury to one of his friends, Wulgar the Boar. The charter recording this gift (henceforward known as Charter 655), (Sawyer 1968, 221) is in the same form as the other land gifts made by the late Anglo Saxon Kings. The main part is in Latin and sets out why the gift is being made, its description, and the type of taxes that will be extracted from its recipient. (Appendices 1, 2). The perambulation of the land boundaries follow (Appendix 3). In some charters these are given in Latin as well as the vernacular which was Old English. In other charters they are in Old English only, as in this case. In the 1930's Grundy published a series of articles on Anglo Saxon boundaries in Dorset. He was able to identify most of them but in the case of Charter 655 he was unsuccessful. He described it as 'possibly no more than a tenement within the town' (Grundy, 1938, 75).

The Manuscript

The only manuscript copy of this charter is contained in the Shaftesbury Cartulary housed at the British Museum known as Harley 61. This cartulary, probably written in the late 14th century, contains copies of a large number of charters relating to lands owned by Shaftesbury Abbey, the earliest of which is from the second half of the seventh century. Charter 655 is within this collection, written in the same hand as all the rest. This copy is judged to be a true copy of a genuine charter (Finberg 1964, 602). Grundy suggests that the language used is at least a century later than the charter's date. This brings it to the years around 1066 A.D., a time when William the Conqueror was re-allocating English lands. It may be that this was the period when the abbey acquired the land; for to be included in the cartulary, the abbey must have judged it to be its own property and not that of Wulgar's descendants.

Size of the Charter land

Is this piece of land worth identifying? It is described as small and the actual number of hides are missing (Appendix 1). However the land is described in terms of hides suggesting that it was larger than a land unit within a town. The work which Tait did on the subject of hides early this century still stands and he suggested that in Dorset a hide approximated to forty acres (Tait 1902, 280-2). The 'os' ending of cassatos in the charter means that the area is more than one hide. The gift is of fields, meadows, pastures and woods, which although a commonplace description in Anglo Saxon charters, does reflect the actual quality of the land. Clearly, this charter's bounds are worth identifying.

Situation

The charter places the land 'at Shaftesbury'. The town is situated at the northern end of the western boundary of Cranborne Chase, and has a spectacular peninsula which extends westward five hundred feet above the Blackmore Vale. Its geology varies through green sandstone to gault and then clay below, and these form the varying soils on Shaftesbury's steep slopes. There is no river but there is a scatter of springs below the ridge. Fortunately the field of search for the charter land is limited. It could not have been to the north of the town for the land did not belong to Shaftesbury. The boundary of Gillingham Forest ran along a line from east to west above the springline of Shaftesbury's northern slopes. Although the earliest perambulation for this boundary is post Saxon there is good reason to believe that this division of land had pre-Saxon beginnings. (Taylor 1982, 7). Nor could the land be to the east of the town. This is a plateau, bleak through its exposure to wind and with no water supply. It is not the place to find the woods or meadows described in the charter. So, leaving out the lands bordering on the north and east of the town, Charter 655 should be found somewhere on the steep slopes along the south and the west.

Methodology

Other Anglo Saxon charter lands in the vicinity have been successfully identified. Fontmell and Compton Abbas, villages a little south of Shaftesbury, were included in charters of 932 A.D. and 956 A.D. respectively. Both sets of Anglo Saxon boundaries are in sympathy with the Tithe Map parish boundaries of 1848 relating to those same villages, indeed for considerable lengths the Anglo Saxon bounds and the Tithe map bounds are exactly the same. These Anglo Saxon lands have boundaries along natural features such as ridges of hills and rivers which often run for long distances.

Changes of direction which are not in sympathy with natural features are marked with a boundary point. The method employed to find the lands of Charter 655 is based on the same principles.

Terminology

The three different prefixes associated with the parishes are important. 'Ancient' is used in the same sense as Frederick Youngs uses the term and is the oldest known parish. (Youngs 1983, 118): 'Medieval' assumes establishment during the medieval period: 'Tithe' represents the land boundaries delineated on the tithe map of 1848.

Identification using parish boundaries

Bogen Wylle. The first and last charter bounds of Wulgar's land are BOGEN WYLLE and BOKENWELLE. Grundy transcribed both as Boywell and Hutchins states that Boywell at the lower end of Burgess Lane, which had the earlier name of Mahounds Lane. (Hutchins 1868, 5). This is now known as Kingsmans Lane. Hutchins also states that Boywell is near Holyrood Mead and this name has survived in a field name to the south of Kingsmans Lane. The Pembroke Survey, a 16th century survey of the town, mentions a Bowell Mead (Pembroke Survey 1909, 508) in association with Gaston. Gaston according to Hutchins is the same as Gascoignes Mead, the field opposite Holyrood Mead (Hutchins 1868, 6). A conflation of these references puts Boywell at the lower end of Kingsmans Lane near Holyrood and Gascoignes Mead.

Brandes Hricg. The next place mentioned on the bound is BRANDES HRICG or in modern English, Brandes Ridge. Hutchins refers to a Brandescroft near St. John's Hill. (Hutchins 1868, 6). In 1990 there is a property with this name near the end of Bimport Street almost at the west end of the promontory near the area known as Castle Hill. The simplest route from Boywell to the Castle Hill area along tithe map parish boundaries is to first follow the western edge of St. Peter's to the bottom of Gold Hill and then take the south and western boundary of Holy Trinity parish up to the western end of the promontory.

Andlang Hrichtes. Once on the ridge the Anglo Saxon instruction, ANDLANG HRICHTES, is to go along it. But there is no tithe map parish boundary to follow along the ridge. The parish boundaries there, cross the ridge and go down the other side. This ridge is the site of Shaftesbury Abbey which was in existence at least one hundred and fifty years before Charter 655, was made. The ridge already belonged to the church and could not form part of this gift. This, therefore, cannot be the right route. Is there another BRANDES HRICG in the vicinity of Shaftesbury? The Anglo Saxon word brand can be translated as fire or torch, and an acceptable translation of BRANDES HRICG is beacon ridge (Gelling pers. comm. 1989). Shaftesbury's westward promontory was obviously one of these. But this same ridge which runs west-east from Castle Hill to Point D, turns south at point D, to run out to Pine Ridge, another ridge which commands extensive views, making it also a candidate for the description Brandes Ridge.

Starting again from Boywell the shortest way to reach the Ridge, still respecting parish boundaries, is to follow northwards St. Peter's western boundary up on to the ridge and turn east. Then follow St. Andrew's southern and St. Martin's south western boundary out to Pine Ridge.

On Bytelesmor. Hutchins says that Bytelesmore is near Holyrood Mead. (Hutchins 1868, 6). The fields immediately north-west of Pine ridge are also near to the southern end of Holyrood Mead. St. Peter's boundary turns a one hundred and twenty degree angle at Pine Ridge, runs first north west and then north back to Boywell.

Perambulation. It seems that the tithe parish boundaries set out above do indicate the approximate position of the bounds of Charter 655. A walk around the tithe parish boundary combined with a closer examination of the medieval parish boundaries may reveal a course closer to the ancient St. Peter's boundaries and perhaps to those of the Anglo Saxon Charter.

At the lower end of Kingsman's Lane at its junction with Watery Lane, there is a spring. This is the vicinity of the springs Houndeswell and Boywell which Hutchins described. As this spring is just inside St. Peter's parish in the north eastern corner of Gascoignes Mead, it is ideally situated to be the BOYWELL of the charter.

St. Peter's boundary runs along Kingsmans Lane for a short distance then turns north along a trackway at Point C. This trackway

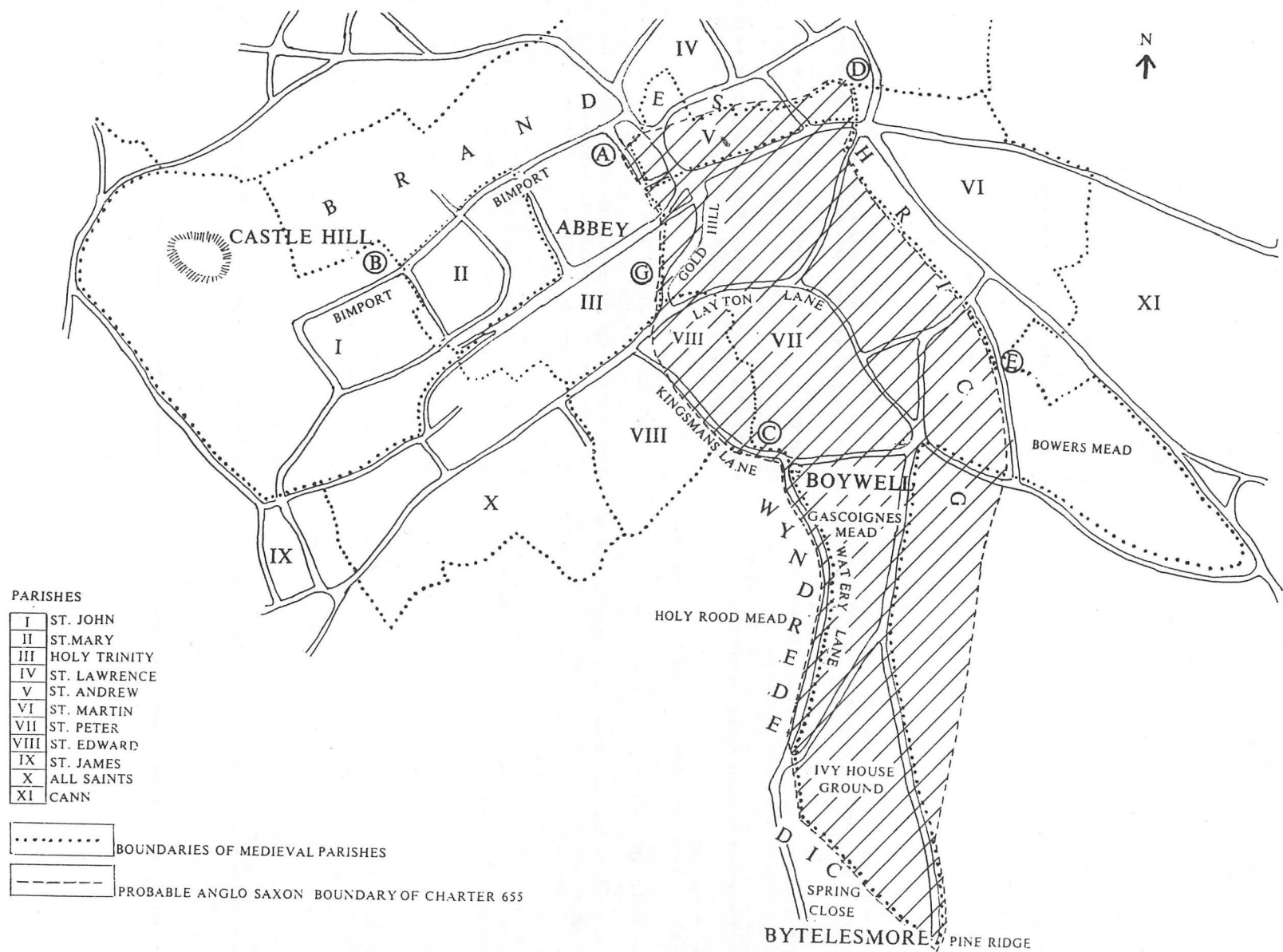


Figure 5. Shaftesbury parish boundaries prepared from the tithe map (after Keen 1984, 223). The suggested area of land grant is cross-hatched

SHAFTESBURY PARISH BOUNDARIES prepared from Tithe Maps

deteriorates into a hedge line which turns north west and emerges, west of Layton House, into Layton Lane. The parish boundary then crosses the road and uses house curtilages to reach Gold Hill. The climb to the top of the ridge is completed on a line a few yards west of Gold Hill wall.

It is unlikely that the route just followed up on to the ridge is exactly the same as that of the boundary of Charter 655. The frequent changes of direction at the south of Layton Lane are not caused by natural features but by tenement boundaries which are in all probability medieval and not Saxon. The most straightforward way up to the top of the ridge from Boywell to Point A. is along the greater length of Kingsman's Lane across to the bottom of Gold Hill, then joining the Tithe Map boundary at J. for the really steep ascent to the top on the route a few yards west of Gold Hill wall. This route would dissect St. Edward's Parish. However as Shaftesbury's Saint Edward the Martyr did not die until many decades after Charter 655 was written this parish is arguably later than the charter. It is likely that when St. Edward's Parish was formed it took a parcel of St. Peter's parish so that the original boundary along Kingsman's Lane was moved eastwards to the Tithe Map line.

The view of the curved ridge can be seen in its entirety from Boywell to Pine Ridge. This would seem to make ALANG HRICG from point A. at the top of Gold Hill out to Pine Ridge the easiest part of the bound to identify. But there are several alternative routes made possible by the presence of the medieval parishes of St. Andrew's and St. Martin's. As in the case of St. Edward's above, these parishes are later than Charter 655 and were likely to have been carved out of the earlier larger parishes. There are two candidates for appropriately placed early parishes, St. Peter's and Cann. It is not immediately obvious from which of these early parishes the later and smaller St. Martin's and St. Andrew's were taken. There are however in North Dorset, examples of how tithe map parishes uncluttered by medieval parishes, and therefore by definition early, relate to each other on the tops of hills. On Hambledon Hill and Duncliffe the surrounding parishes share the hill top so that each has access to the highest land. If this pattern existed on Shaftesbury it is probable that St. Martin's was part of Cann parish and that St. Andrew's was part of St. Peter's. From this it follows that the early St. Peter's boundary along the ridge was St. Andrew's northern boundary crossing to St. Martin's south western boundary at Point D. out to Point E.

There is an obvious line along the ridge from Point E. to Pine Ridge, now marked by a level path for the whole distance. However the tithe boundary of St. Peter's diverts sharply around Bowers Mead and then descends to the bottom of the ridge along French Mill Lane. There is evidence of considerable quarrying activity on the top and on the slopes of the ridge to the west of the path from Point E to Pine Ridge. It is probable that the line of French Mill Lane was on the ridge and not below it in 958 A.D.

The value of perambulations is well demonstrated by the next section of this bound. The next instruction takes us along WYNDREDE DIC to BOKENWELLE without an instruction to descend. The reason for no mention of a descent is apparent when looking north west from Pine Ridge. Sweeping down from the ridge there is a bank three to four metres high, which continues back to Boywell on exactly the same line as St Peter's tithe map boundary. This bank, the WYNDREDE DIC of the charter, is neither a natural feature nor the result of quarrying (Peter Stanier pers. comm. 1989). It is a shallow cliff or upright bank with no accompanying ditch. It is persistent in this profile for its length although its height is gradually modified to level with adjacent fields at Boywell.

Conclusion

It is possible to reach a conclusion about the siting of Charter 655. It has a close relationship with the St. Peter's parish as shown on the tithe map and is arguably the same as the ancient St. Peter's parish. The complex tithe map boundaries in the centre of Shaftesbury are obviously influenced by urban development and have obscured the natural line of the Anglo Saxon boundary. Where the boundary has been undisturbed by either quarrying, building or roads it is still possible to know its exact course. The area of the Anglo Saxon charter land is, at a rough estimate, sixty acres. This would approximate to one and a half hides of land suitable for the meadows, fields, pastures and woods, described in Charter 655: its shape and placing in the landscape similar to the Anglo Saxon boundaries of Compton and Fontmell.

The recognition of the site of an Anglo Saxon land boundary at Shaftesbury provides a foundation for further work on the early boundaries. If early land units can be recognised then the develop-

ment pattern of the town will be better understood.

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APPENDIX 1 LATIN SCRIPT

Transcription of Charter M.S: B. M., Harley 61, fo.16'

Hec est inscriptio Adwig Regis de [] cassatos apud Shaftesbury

Domino dominorum dominante in secula seculorum regna regnorum huius presentis seculi transeant sicut ignominica et locus huius mundi peribit et sunt eterna sed superna eterna sunt. Quamobrem ego Aedwig Rex Anglorum gubernator et rector uni meorum Karorum quem cordetenus diligo nocitato nomine Wlgar leofa modicam partem terre id est [] cassatos perpetualiter concedo in illo loco ubi anglica more appellacione dicitur at Scaeftesberi habeat ac possideat quamdiu vivat et post se cuicumque voluit heredi derelinquat in eternam hereditatem. maneat igitur meum hoc immobile donum eterna libertate iocundum cum omnibus que ad ipsum locum pertinere dinoscuntur tam in magnis quam in modicis rebus, campis, pascuis, pratis, silvis exceptis istis tribus expeditione pontis arcisve constructione. Siquis vero hoc nostrum karisma aliqua machinatione infringere conatus fuerit veniam non hic mereatur nec in futuro regni celestis clavigerum propicium habeat nisi prius hic ad satisfacionem venire maluerit. Predicta siquidem tellus hiis terminis circumincta clarescit.

APPENDIX 2 ENGLISH SCRIPT

English translation of Charter M.S: B. M. Harley 61, fo.16'

This is King Eadwig's writing concerning [blank] hides at Shaftesbury

The Lord of lords reigns from age to age but the thrones of the kingdoms of this present age may pass away like things of no worth and the place of this world will perish and [?eternal things exist?]* but heavenly things are eternal. For this reason I Eadwig, king, governor and ruler of the English, grant for ever to one of my dear ones whom I love with all my heart known by the name of Wulgar the well-beloved a small piece of land, that is to say [blank] hides in the place which is called in English at Scaeftesberi. Let him have and possess it while he lives and leave it after his death to whomsoever he wishes as heir in everlasting inheritance; thus may this my gift remain unchangeable to be enjoyed in perpetual liberty, with everything that is recognised as belonging to that place in matters great and small, fields, meadows, pastures, woods, except these three: fyrd, brigbote or burhbote. And if anyone tries by any device to break our gift, may he neither win pardon here nor have the favour of the doorkeeper of heaven in time to come, unless he first chooses to make atonement here. The said land is identified as lying within these boundaries:

APPENDIX 3

Old English transcription of bounds with translation M.S: B.M., Harley 61, fo.16'.

THIS SANT THE LANDIMARE AT SHAFTESBERI.
 These are the bounds at Shaftesbury.

AREST OF BOGEN WYLLE ON BRANDES HRICG.
 First from Bogen Spring to Brand's Ridge.

ANDLANG HRICHTES ON BYTELESMORE.
 Along the ridge to Bytels moor.

OF BYTELESMORE ON WYNDREDE DIC.
 From Bytel's moor on the windy (or winding) bank.

OF THARE DICHE ON BOKENWELLE.
 From the bank to Bogen Spring.

THE FONT AT MELBURY BUBB:
AN INTERPRETATION

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SUMMARY

A solution for the carvings on the font at Melbury Bubb is proposed, in which for the first time every animal is identified and shown to illustrate a scene from the medieval bestiary.

In the church at Melbury Bubb (ST/597065) is a font that has been described and illustrated many times (Bond 1908 P1.104; Prior and Gardner 1912 Fig. 105; RCHM Dorset West 1: 1952 P1.15; Rice 1952 P1.30b; Stone 1954, 1972 P1. 17B; Cramp 1975 P1.XXI). It appears to consist of the base of a column turned upside down and hollowed out. It is covered with carvings of animals, which are entangled in simple interlace to which the tails of some of them contribute; since they are the wrong way up most of the published photographs have to be reversed to be understood. There is a stag, and the other six have been variously identified as lion, panther, horse, wolf, dog, a lizard-like creature and a dolphin. It is generally recognized that there are signs of combat; Cramp for example says (p.198) 'obviously here there is some connection with the oriental lion-hunt motif'. Rice derives the stag also from the east, particularly Scythia, via Merovingian France. No one has ever suggested rôles for all the animals.

I now propose an interpretation in which each animal is identified and given a part in a single context: all represent a scene from the medieval bestiary. In support of this I give in what follows brief quotations, in *italic*, from T. H. White's translation of a bestiary manuscript in the Cambridge University Library, li 4 26.

Plate 7 shows the stag. Its antlers are not quite correct but near enough to show that it is a red deer, *cervus* of the bestiaries; its cloven hooves suggest that it was carved by someone who knew the animal, which is native to Britain and probably then common in

Dorset. It is usually shown in bestiary illustrations in a comparable pose. On the observer's left it can just be seen that the stag's muzzle comes against a long-snouted creature with near-vertical body; viewed from a few degrees clockwise, as in Bond's photograph, it can be seen to have two legs and a tail that becomes interlace. An animal of this form appears in many illustrations of 11 species of *serpentes* in bestiaries. (The only possible translation of the Latin is 'serpents', but one must remember that this term does not mean only, though it includes, snakes, the sense in which it is now generally used). *When they [i.e. stags] feel themselves to be weighed down by illness, they suck snakes [the Latin word so translated is serpentes] from their holes . . . and . . . are restored to health by a meal of them.* Several bestiary illustrations for *cervus* show a stag in some sort of contact with a snake on the ground. Its placing in a vertical position on the font fits better on to a convex surface, and makes it easier for every space to be filled, which is a characteristic of early sculpture.

Going counter-clockwise, to the right of the stag is a smaller animal hanging from the jaws of a large beast of which only the forequarters are visible here. In Plate 3 the whole animal is shown. It is a lion (*leo*) breathing life into its cub which has been born dead. *When a lioness gives birth to her cubs, she brings them forth dead and lays them up lifeless for three days - until their father, coming on the third day, breathes in their faces and makes them alive.* The lion is here of a fairly typical Romanesque form, with a tail that ends in a leaf-like expansion, as it does for instance in the bestiary from which my quotations are taken. Grooves in the neck indicate the mane. In bestiary pictures of this scene the cub is on the ground; presumably it is here shown vertically for the same reason as is the serpent.

To the right of the lion are the hind legs of another beast whose head and forelimbs are shown in Plate 4. It is a lioness, doing nothing in particular, as she does in most bestiary pictures of *leo*. Lion and lioness are juxtaposed on several early tympana, for example Milborne Port (Somerset, SY/675190), Lathbury (Bucks,



Plate 2. Melbury Bubb Font. Stag, with serpent on the observer's left, and lion cub with forequarters of its father on the right.



Plate 3. Melbury Bubb Font. Lion.

SP/875450), and Wordwell (Suffolk, TL/828721); these may even be Saxon, although there is a prejudice against this view because no French tympana so early as this are known. Occupying most of Plate 4, are the foreparts of a large animal whose jaws bite the neck of a smaller one, holding it off the ground. This is a hyena (*yena*) seizing a dog. *The yena . . . frequents the sheepfold . . . and is able to do imitations of the human voice . . . Such dogs as it has called out like this, it gobbles up.* Plate 5, shows the rest of the hyena's body. The bestiary artists did not know the hyena, which is an African animal, so they often drew it to look rather lion-like, as it does here. Bestiaries usually illustrate another activity of the hyena, in which it pulls a corpse out of a grave or coffin. In Cambridge University Library MS Kk 4 25 (f.71) there are two pictures of a hyena. One seizes a corpse from a coffin as usual, while the other, which is red and rather like a large dog, holds a smaller yellow dog by the neck. The feet of this are well drawn, and the head is that of a mastiff, the sort used to guard sheep in the middle ages.

Most medievalists who have mentioned bestiaries at all have dismissed them as mixtures of quotations from scripture and old wives' tales, which may be true of their remote ancestor, the Greek *Physiologus*, but the bestiary itself is an attempt at a serious natural history for use in monasteries, probably composed in England. As time went on successive revisions eliminated more and more of the material of the *Physiologus* and added new and often correct natural history as well as more species. Mammals may have evolved from fish, but the dog is not a dogfish, even though they share certain features; so the bestiary is not the *Physiologus*. (Yapp 1989).

The carving on the font has been dated, without much evidence, to the 10th century or the beginning of the 11th. No bestiary as early as this is known, the earliest coming from the beginning of the 12th century and the majority from the last quarter of that century (eg CUL li.4 26) or later. There is evidence that illustrated bestiaries were in existence earlier than this. Bestiary animals occur in the borders of the Bayeux Tapestry, which was probably woven

about 1070. In my discussion of these (Yapp 1987) I suggest that from this and other evidence illustrated bestiaries existed earlier than this. If the font is correctly dated to not later than about 1000 A.D. a bestiary must have been available then for the sculptor to base his carving upon it.

It will probably be said that there is no reason why bestiary stories should be illustrated on a font. Even if this is true there is no reason why they should not be. Since the animals are upside down they must have been carved when the stone had another use; this may have been, as is usually assumed, the base of a cross, but it might have been part of a purely secular column. In any case, bestiary animals are carved on Norman churches, notably Alne (Yorkshire, SE/496653), where they are actually labelled in the stone with the bestiary names. Animals were regarded as the works of God, so that their representation was a praise to Him and there could be no objection to using such pictures on a font. Anyone who insists that all these early works of art had a symbolic meaning can easily find one. The bestiary text compares the regeneration of the lion's cubs after three days to the resurrection of Christ, and the deceit of the hyena to the Jews for their desertion of the true God. The stag stands for Christ, but the symbolism is more closely connected with parts of the natural history not illustrated on the font: the serpent that is devoured is the devil.

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Plate 4. Melbury Bubb Font. Hyena, with its prey, a dog, and lioness just visible on the left.



Plate 5. Melbury Bubb Font. Hyena.

THE MIZMAZE AT LEIGH, NEAR SHERBORNE,
DORSET

Katherine Barker

The Mizmaze at Leigh (ST 620082) belongs to a class of historic monument known as a *turf maze*.¹ Formerly well represented in England only a few are now maintained in good order. By definition a turf maze is an ephemeral feature in the landscape and without regular attention is easily lost. This note aims to bring to wider notice three little known pictorial representations of the site at Leigh, the first depicted on the Isaac Taylor *Map of Dorset* (1765), the second on Bayly's *Map of Dorset* (1773) and the third, the earliest and probably most important, to be found on an Elizabethan map of the manors of north Dorset dated to between 1569 and 1574. Assembling these has afforded an opportunity to consider what little is at present known of the history of the site.

In the first edition of Hutchin's *History of Dorset* (1774 ii, 468) a single sentence informs us that 'about half a mile S[outh] of Leigh Mr Taylor's map places a Miz-maze ...'. In fact it appears on both the 1765 and 1795 editions of Isaac Taylor's *Map of Dorset* and it is the second edition that is reproduced here (Figure 6a.). It may be noted that Taylor omits the hyphen from the spelling of *Mizmaze*.² On this scale there is insufficient space for much real-life detail and the drawing of the site is probably largely conventional. Nevertheless, the maze is clearly indicated by three concentric ovals with traces in the printing ink of a central linking cross. It is correctly sited on rising ground south of the village and within *Lye Common*, although the paths indicated cannot readily be traced today.

A decade later there appeared J. Bayly's *Map of Dorset* (1773) which owes a great deal to Taylor. Here again the site is clearly depicted but this time in the form of a lightly dotted spiral and labelled simply 'Maze' (Figure 6b.).

In the second and third editions of the *History of Dorset* (1815 iv 270-1 and 1870 iv 451) the Maze merits a whole paragraph. (The wording from the third edition is given in brackets.)

On an eminence in the common, about a quarter of a mile south from the village, is a maze of circular form, (about thirty paces in diameter), surrounded by a bank and ditch, and occupying an eighth part of an acre. The banks of earth of which it is composed are set almost close together, and are somewhat more than one foot in width and about half a foot in height.

Heretofore it was the custom for the young men of the village to scour out the trenches and pare the banks once in six or seven years, and the day appropriated for the purpose was passed in rustic merriment and festivity. But of late years, either through want of encouragement from the principal inhabitants, or from a less reverence for a curious piece of antiquity, this salutary work has been neglected, and there is at present great danger that in the lapse of a few years, the traces of the several trenches or divisions will no longer be discernible, particularly in the centre, where the circles being shorter, and consequently more susceptible of injury, the banks have been trodden down by the numerous cattle that resort to the spot to enjoy the cool breeze in summer.

Both second and third editions of the *History* bring us up -to-date on events after 1800.

In the year 1800 this [Leigh] common was inclosed and that (the) part on which the mizmaze was formed consisting (consisted) of a small field, being in the possession of an individual who has (had) taken no care to preserve this work of antiquity, it is now (was) almost obliterated.

The Mizmaze is not shown on the Leigh Inclosure Award of 1804. Comparison of the fields shown on the Inclosure map with both those on the Tithe map (1840) and on the OS first edition six-inch series (1888) suggests the site lay in a newly created field called *Burls* and held by Elizabeth Cox and Robert Read from Earl Digby. It is this field which is listed in the Tithe award as *Mismaze Common* and which was then under 'furze' although no legal access had been granted in 1804. By 1840 it was in possession of Matthew Cox, who was both owner and occupier – a smallholder whose only other property in Leigh consisted of a cottage and orchard on the western edge of the village. While not depicting the Mizmaze itself, the 1804 award mentions the name twice but in unexpected places. Both are held by Thomas Hunt senior from Earl Digby, the first numbered 74 is a 'certain customary tenement ... called Mizmaze' which lies immediately south of the present Drummer's Castle Farm, just over half a mile SSE of the site itself. Then follows, out of sequence at number 95, a further reference to 'a certain customary tenement ... called also Mizmaze bounded on the north-east by old inclosures and on the south-east by Mizmaze Drove [now back Drove] ...'. This field lies some 200 m east of the actual site of the

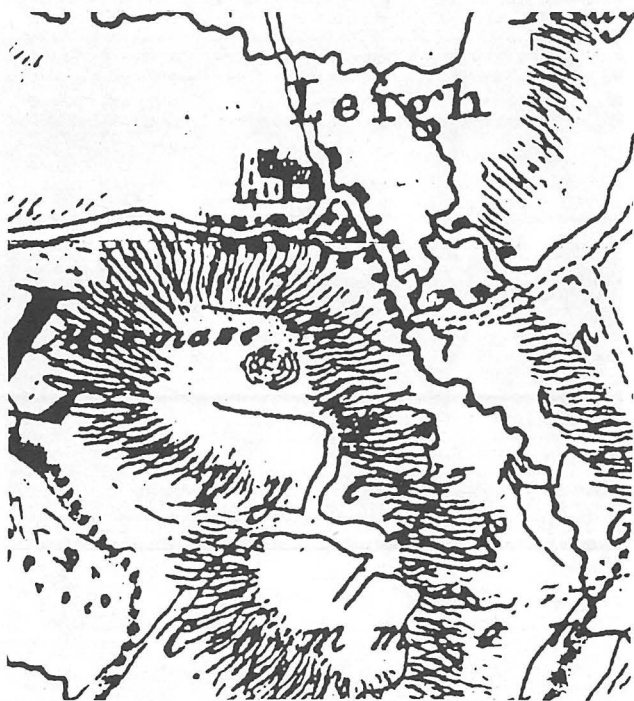


Figure 6a. The Leigh Mizmaze from Isaac Taylor's *Map of Dorset*, 2nd edition 1795 (much enlarged).

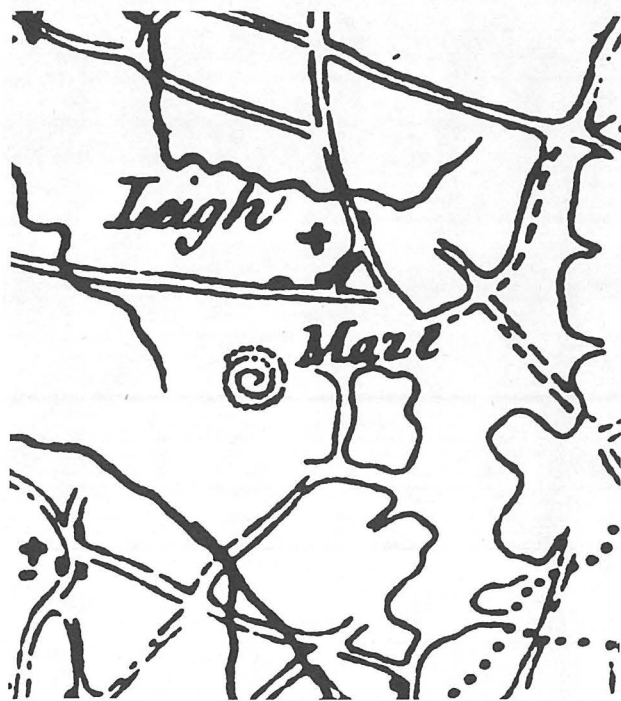


Figure 6b. The Leigh Mizmaze from J. Bayly's *Map of Dorset*, 1773 (much enlarged).

maze and is listed as common pasture in 1840, by which time it was in possession of one Simon Hunt.³

Nearly two centuries have elapsed since Inclosure but the site of the Mizmaze is not completely lost. The first edition of the OS six-inch series of 1888 shows the maze by means of a 6-sided figure, one recently confirmed by aerial photography (Plate 6) which reveals a low and badly degraded earthwork of distinctly hexagonal plan. When Hutchins recorded it as circular he may have been referring to the maze itself and not to the bank around it. The enclosing bank is much eroded and stands little more than 60 cm (2') high although its width suggests it once stood considerably higher. The length of each of its six sides is very approximately 14.5 metres. Measurements taken by the Dorset Sites and Monuments Record from the crests of the banks indicate a basic lay-out rather more oval than circular. A distance of 31.5 m recorded from NNE to SSW and another of 26.5 m from WNW to ESE suggests something broadly consistent with the orientation and shape of Taylor's 1765 map symbol. Within the enclosure there is a very low central mound with a diameter of some 6.5 metres. There remain the vestiges of an outer ditch from which the material for the bank was presumably dug out, and there are other ill-defined features associated with the perimeter the nature of which it is not possible to determine. Just as Hutchins says, the maze stands on an 'eminence' and enjoys a commanding view of the surrounding countryside.

Hutchins deemed the Leigh maze to be 'probably such a one as ... in Pimperne' (1774 ii 468) the use of which he later describes (1815 iii 292-3). Both were turf mazes and their function – that of recreation – was the same. There perhaps the resemblance ends. The Pimperne maze was cut down onto chalk whereas the Leigh maze was on heavy clay and their ground plans could scarcely be more different. Hutchins' published plan of Pimperne shows what may best be described as a meandering labyrinth of basically triangular design which covered nearly an acre. Saward (1985 9-11) suggests the Leigh maze belonged to the symmetrical 'Chartres-type' and has attempted a reconstruction based on the turf maze at Breamore, Hants. While certainly reminiscent of Taylor's symbol it must be noted that at present no one knows the original figure of the Mizmaze, nor how it evolved over the years it was in use. Indeed from the information available it is difficult to know how best to think of the basic plan – whether hexagonal, circular or oval.

The earliest known representation of the Mizmaze is to be found on an Elizabethan map of the manors of north Dorset (BL Add MS 52522, Harvey 1965 82-4) which dates from between 1569 and 1574.⁴ Finely drawn and coloured, the survey is uneven in its treat-



Plate 6. Aerial view of the Leigh Mizmaze taken in 1985 looking north-east to Leigh Bridge, and east (to the right of the buildings) over part of Hitchens (1840). The hexagonal enclosure can be seen and slight remains of a low central mound. The straight hedge east of the site dates from Inclosure (1804); it adjoins the continuous hedgerow depicted circa 1570 which then divided the village tofts from the common.

ment of the area, but there can be no doubt that it is based on an actual survey. The Mizmaze itself is not named, but under magnification it is a wholly unmistakable feature despite the fact that the drawing is barely 6 mm across (Plate 7). The site is shown in plan, and the hill in profile. The cartographer has depicted the maze by means of two concentric ovals, the outer one incorporating the curve of the hill. The ovals are linked by a central cross set at a slight angle, which may be compared with Taylor's symbol. Above the maze are four tiny shapes which are something of a puzzle. They are most likely to represent bushes; an enclosing hedge would certainly have been needed as protection from cattle grazed by Leigh copyholders on the common.⁵ The steepness of the surrounding bank is shown by fine hachuring. Like the other drawings this is largely conventional in style, and yet the slight angle at which the maze is set on the hillside could have been taken from life; seen from the north as one approaches from the village this is very much how the earthwork appears. It seems likely that BL Add MS 52522 preserves one of the earliest representations of a rural turf maze in England.

The Mizmaze, 'Witches' Corner' and William Barnes

The Elizabethan map may make some contribution to an understanding of an oft-repeated story in Leigh itself of the supposed connection between the Mizmaze and Witchcraft, which seems likely to have derived its inspiration from two notes published by William Barnes in the same volume of the 1879 *Proceedings*. The Mizmaze was the subject of the first note, and the second

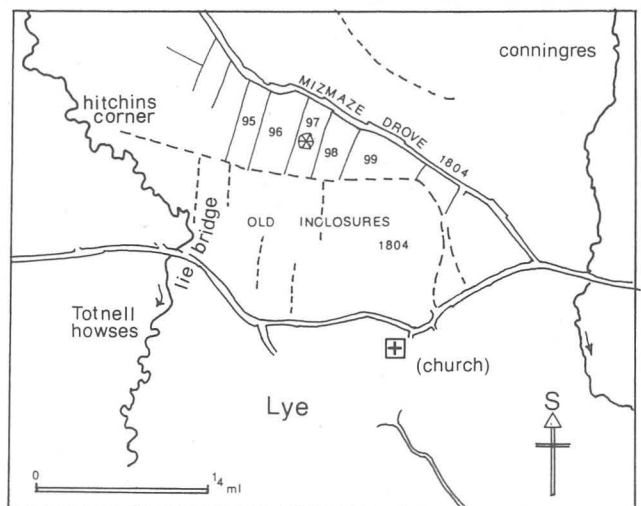


Plate 7. The village of Leigh from BL Add Ms 52522 circa 1570 and the same redrawn. North is at the bottom of the map. The key shows those features that can plausibly be identified on the OS first edition six-inch series of 1888; numbered fields are taken from the Inclosure map (1804), the site of the Mizmaze occupies number 97. Houses shown along Mizmaze Drove in 1888 occupy similar positions to those shown circa 1570; several house platforms are still visible. Reproduced by permission of the British Library.

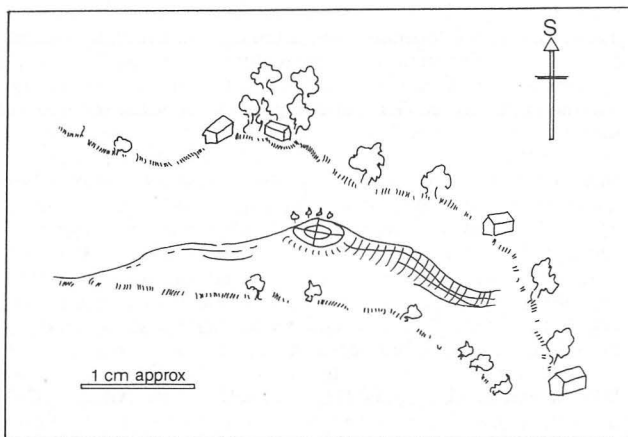


Figure 7. Drawing of the Leigh Mizmaze made from BL Add MS 52522, circa 1570. North is at the bottom.

concerned a place called *Witches' Corner* on Leigh Common.

Plate 7 shows the area around Leigh as drawn about 1570 which may be compared with the same area taken from the OS first edition six-inch series of 1888. Running behind the village houses on the south (top) side is a row of narrow fields or tofts separated from the Common by a long and continuous hedgerow most of which is still in existence. At the eastern (left) end of the hedge where it joins the stream is *Hitchins corner*. It is a name which has persisted; in 1840 several closes in the area all carry the name *Hitchens*, and today is *Hedgings* or *Hedgins*. 'Many years ago' wrote Barnes in 1879, 'I was told by a man of this neighbourhood that corner of Leigh Common was called *Witches' Corner*' Barnes later came across some old depositions from Somerset magistrates of the years between 1650 and 1664 which recorded a witches' sisterhood that sometimes met on Leigh Common. Barnes saw *Witches' Corner* as a folk memory of their meetings. It is perhaps necessary to draw attention to some very similar-sounding names, *Hitchins*, *Hitchens*, and *Witches* and all seemingly at a corner. Were they all perhaps one and the same place?

In his note on *Witches' Corner* Barnes makes no reference to the mizmaze. Indeed, as he comments himself when quoting Coker, who tells of the annual repairing of the Mizmaze by the young men, it [the maze] was clearly 'for their games, and not for any

heathenish or other ceremony of their elders'. But the supposed link between Witchcraft and the Mizmaze is likely to remain prominent in popular consciousness for at least as long as the most attractive Leigh WI banner continues to display a witch in full regalia on a broomstick taking a carefully considered view of a curious six-sided puzzle.⁸

NOTES

- 1 RCHM Dorset vol 1 (West) 1952, 132.
- 2 'Mizmaze' is described by Dr Johnson (*Dictionary* 1775) as a cant word (i.e. dialect or slang) formed by re-duplication, normally confined to southern England. The RCHM gives the word as Miz Maze.
- 3 It is difficult to avoid the conclusion that the Mizmaze names had been transferred in 1804 – if not actually misplaced. Each tenement is identified not only by a number on the map but by reference to its neighbours in the award. The entry for tenement number 75 (adjacent to number 74 'Mizmaze') certainly contains an error. Number 75 is described as bounded to the east by *Mizmaze Drove* – when *Main Drove* must be meant and is clearly marked on the map as such.
- 4 The Pimperne maze was destroyed by the plough about 1730. Hutchins cites Aubrey who 'informs us, there were many [mazes] in England before the Civil wars; and that the young people used on festivals to dance, or, as the term was, to tread them ...' Mazes were frequently to be found on commons or open spaces. A maze was often called *Troy Town*; there is a Troy Town Farm and Copse in Puddletown (Mills 1977 I 322) and a close called *Troy Town* in Sherborne, now lost (survey of J Ladd, 1735). It occupied an area south-west of the abbey church opposite what is now the Westbury Hall.
- 5 Formal mazes of various kinds were popular in Tudor England (see Harley J. B. in (ed) Tyacke S. *English Map-Making 1500-1650* (London 1983). More rustic seems to have been the maze mentioned by Shakespeare in *A Midsummer Night's Dream* II i 99.
'The nine men's morris is fill'd up with mud
And the quaint mazes in the wanton green
For lack of tread are undistinguishable.'
- 6 Sherborne Manor Survey 1615, DRO KG 1456.
- 7 Coker's *Survey of Dorsetshire* was written by Thomas Gerard about 1625. This cannot however, have been the source of Barnes' information – the *Survey* makes no mention of Leigh.
- 8 Reproduced both by Saward (1985, 8) and by Boswell B. *Leigh A Dorset Village* (Castle Cary, 1986) 6, 150.

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ACKNOWLEDGEMENTS

I am much indebted to Jeff Saward for expertise on mazes of all kinds which he made freely available to me; to Mr. and Mrs. Percy Read of Leigh; to Cmdr. T. L. Bailey for the aerial photograph and to the British Library for permission to reproduce part of BL Add MS 52522 (Plate 7).

Natural History Reports

GEOLOGY

M. R. HOUSE

The translation of Paul Ensom to Yorkshire corresponded with my move from Yorkshire to the south. All members will appreciate the enormous amount Paul did for Dorset Geology and he was a great strength to all interested in the subject. We wish him well at the York Museum and envy that Museum in having so active an addition to their staff. I edited Dorset Geology after W. D. Lang relinquished the responsibility in 1963, and I continued until Maureen Samuel took over twenty-three years ago. I have yet to establish links with all those likely to contribute to this section from time to time, and have yet to re-establish many of my own interests. I would welcome contributions at any time but especially before the year-end. They should be sent either directly to the Editor of the *Proceedings* or, for short notes, directly to me (Prof. M. R. House, Department of Geology, The University, Southampton, SO9 5NH).

Two general contributions to Dorset geology which have been published in the past year should be noted. The first is the bibliography published by the Society (Thomas and Ensom, 1989) and available from the Society. The second is a new guide to the Dorset coast (House 1989) which is available from the Geologists' Association, c/o The Geological Society, Burlington House, Piccadilly, London W1V 0JU.

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- House, M. R., 1989, *Geology of the Dorset Coast*. Geologists' Association Guide, 162 pp, 41 text-figs., 34pls.
Thomas, J., and Ensom, P. 1989. *Bibliography and Index of Dorset Geology*. Dorset Natural History and Archaeological Society, 102 pp.

Correction to 'A remarkable vertebrate site in the Purbeck Limestone Formation on the isle of Purbeck', P. C. Ensom, *Dorset Proceedings*, Vol. 108. 1987. pp 205-206.

P. C. ENSOM

An error appeared in the above note concerning the correlation of the footprint cast horizon at Sunnydown Farm with the section at Worbarrow Tout. In paragraph three I stated that the bed could be correlated with WB112 a bed from which footprints had been recorded by myself in previous notes. In fact no footprints had been recorded from WB112 (see Ensom 1985) and the bed number should have read WB117.

West (1988) in his discussion of the sediments in which the footprints and microvertebrate faunas were preserved quoted my correlation and thus unwittingly perpetuated the error.

Ensom, P. C., 1986, 'An annotated section of the Purbeck Limestone Formation at Worbarrow Tout, Dorset', *Dorset Proceedings*, Vol. 106, pp. 87-91.

West, I. M., 1987, 'Notes on some Purbeck sediments associated with the dinosaur footprints at Sunnydown Farm, near Langton Matravers, Dorset', *Dorset Proceedings*, Vol. 109, pp. 153-154.

A New Tridactyl Footprint Impression in Durlston Bay, Swanage

J. F. NUNN

There is a hitherto undescribed, although very distinct, tridactyl footprint impression in the outcrop of the Durlston Beds between the two major faults close to the Zigzag path (Plate 1). The impression is on the lower side of the Lias bed (DB 118) formed as a cast

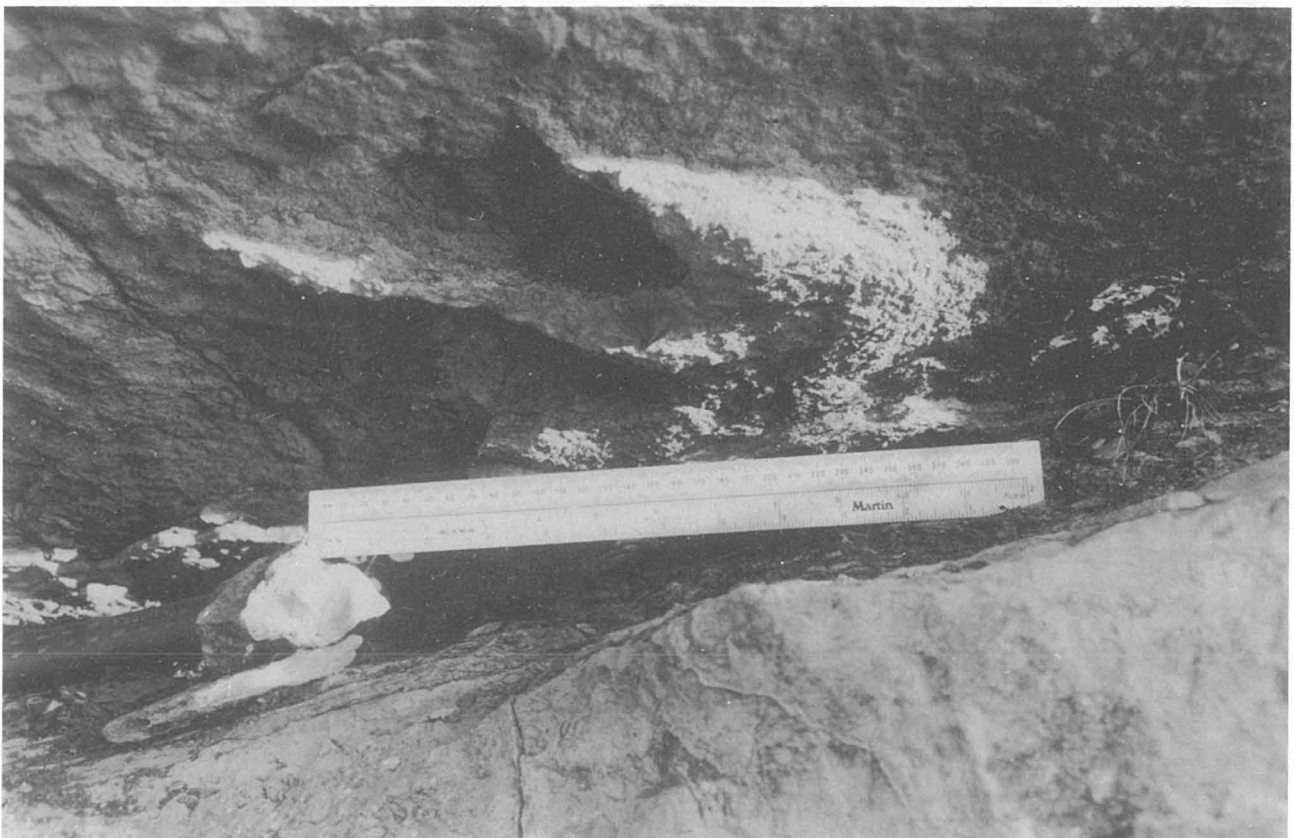


Plate 1. Cast of a tridactyl footprint on the lower side of DB 118 in Durlston Bay. The scale is 0.3 m.

within an actual footprint in the shales (now disappeared) of the underlying DB117. The location is SZ 03479 78055 and approximately 15 m north of the little grassy plateau at the bottom of the Zigzag Path immediately before it descends to the beach. The footprint is approached by a short and steep path which leads to a viewpoint overlooking the northern part of Durlston Bay. At this point the beds are dipping about 24° to the west.

The impression stands a maximum of 0.02 m proud of the under-surface of DB 118 and the centre line of the middle toe is south-pointing on a true bearing N 208°E. The overall length of the footprint is 0.31 m and the maximal width 0.23 m, but the tip of the claw on the west side is missing. The cast is preserved in considerable detail and is, unusually for Durlston Bay, in a stable outcrop unlikely to fall. It appears to be well protected from weathering since the underlying shales (DB 117) must have weathered out many years ago. This footprint can easily be seen and is very conveniently located for a field trip, but it is fragile and no attempt should be made to remove it.

Ensom (1985) has described a pair of tridactyl footprints at Worbarrow Tout (SY 869 796) on the underside of WB 125 (being an impression of a cast originally made in WB 124). It is likely that WB 125 corresponds to DB 118 and the dimensions of the first (length 0.35 m and width 0.29) correspond closely to the footprint here described.

A trackway of casts of tridactyl and sauropod footprints was found on the under side of DB 103 (Cap Bed) at Sunnysdown Farm Quarry, SY 9822 7880 (Ensom, 1987), and there is a well known though apparently undescribed tridactyl impression under the same bed in Durlston Bay itself (SZ 03656 78390). This is a particularly robust cast in a reasonably stable part of the cliff.

Apart from these casts, there are reports of numerous footprints in the following beds at Durlston Bay: DB 116b, 117/118, 121, 216, 220 and possibly 116a (Ensom, 1983, 1985), but most are on fallen blocks or are indistinct. There are many reports of footprints in inland quarries featuring the same beds which outcrop in Durlston Bay. Delair and Lander (1973) and El Shahat and West (1983) report footprints in the following beds: DB 101, 114, 121, 123, 125, 127, 128, 129, 144, 183, 186 and 220, but not in DB 118.

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BOTANY

D. PEARMAN

The momentum of renewed interest in the flora of the county, which started in 1988, continued unabated throughout 1989. The BSBI recorder, Dr. H. J. M. Bowen retired from Reading to live in the county, the NCC Rare Plants Survey was completed and a number of new contributors appeared on the scene.

Some really good records were made, of which the best was *Lythrum hyssopifolia* (Grass Poly). Others included the first record for 50 years of *Bupleurum tenuissimum* (Slender Hare's Ear), and a very large colony of the grass *Gaudinia fragilis*, which is assumed to be alien, but appears in very natural surroundings. Another excellent record was the refinding of *Pilularia globulifera* (Pillwort) in the same sort of habitat that Professor Good recorded it fifty-five years ago.

The writer has recently compiled a register of the known sites of the rarer, as opposed to rarest, plants, which, perhaps not unexpectedly, shows that many of these are really threatened, not only by habitat destruction but more often by habitat change, especially

lack of heathland management. It is one thing saving the heaths from planners and quite another grazing them, destroying seedling conifers and managing gorse. Such flowers as *Cicendia filiformis* (Yellow Centaury) are down to one or two sites, *Drosera anglica* (Great Sundew) perhaps five, *Hypochaeris glabra* (Smooth Catsear), very few, *Radiola linoides* (Allseed), one site since mid 1970s and *Trifolium suffocatum* (Suffocated Clover), one record since the 1960s. This may overstate the case but one only has to look at any heath to see that the possible habitats for the above are dramatically smaller than even 20 years ago. Even a formerly common plant such as *Chamaemelum nobile* (Chamomile) is barely recorded in the last 15 years.

The storms of December 1989 have completely altered the appearance of Chesil beach particularly from Abbotsbury to Cogden Beach. All vegetation has disappeared from the crest on a three mile stretch, including the *Crambe maritima* (Sea Kale). Of course, much has merely been buried, and presumably is used to this, as at the *Lathyrus japonicus* (Sea Pea) sites, but in early January the shore was littered with Sea Kale stalks. The Kale had increased substantially since the 1930s and it will be interesting to see the effect of the storm over the next couple of years.

This report has been compiled from records from H. J. M. Bowen, A. Byfield, J. Davis, S. Eden, B. Edwards, R. FitzGerald, A. Horsfall, A. C. Leslie, D. Pearman, R. Walls.

Equisetum variegatum (Variegated Horsetail)

A second county locality at Worbarrow. It is in some quantity here on a sandy cliff face, but has not been seen recently at its original locality on the southern shore of Poole Harbour near Fitzworth.

Ophioglossum vulgatum (Adderstongue)

Powerstock Common, bare soil in thorn scrub.

Oreopteris limbosperma (Lemon-Scented Fern)

Woods above Lychett Heath House. There are plenty of old records for this plant which ought to be found on the heathy hills in the west of the county as well as various sites in the Poole basin, but apart from records from St. Leonards there are no other records in DERC since 1905. This cannot be true.

Thelypteris thelypteroides (Marsh Fern)

Two more records this year from Lytchett and Morden, which bring the total sites for Dorset to five. The habitats of both are similar - very wet carr.

Dryopteris aemula (Hay-Scented Buckler Fern)

Monkton Wyld, confirming the 1960 record. Still in one location in Dorset, found this year in two small clumps.

Polystichum aculeatum (Hard Shield Fern)

Middlemarsh - one clump. Much rarer in Dorset than *Polystichum setiferum* (Soft Shield Fern).

Pilularia globulifera (Pillwort)

At least four sites near Furzebrook, in old clay pits. In two of these it is abundant. There has been no record in Dorset since 1938 when Professor Good recorded it from the Verwood area. Good did find it in clay pits on Grange Heath and Scotland, and it may well have been in the area for the whole time.

Ranunculus lingua (Greater Spearwort)

Bloxworth. This species is extinct in all its known Dorset stations. It does occur sparingly as an introduction, and the status of the above record is not known.

Ranunculus baudotii

Burton Mere. Fourth post-war record.

Fumaria vaillantii (Few-flowered Fumitory)

Redcliff, waste ground. Fourth record for county.

Barbarea verna (Early Wintercress)

Portland, fallow land North of Weston. Bowles Barrett (*Flora of Portland* 1912) recorded this in quarries around Wide St. and the Prison.

Silene gallica (Small Flowered Catchfly)

Winterborne Kingston, chalky arable; Moreton, set-aside field.

Silene nutans (Nottingham Catchfly)

Between Mupe and Arish Mell, in quantity; oddly enough never before recorded from there. Elsewhere found only on White Nothe and Ballard Down with an unconfirmed record from Bats Head.

Chenopodium hybridum (Sowbane)

Near Charborough and waste ground to East of Redcliff.

Geranium columbinum (Long Stalked Cranesbill)

Near Charborough, a few plants. Only a few records in the last forty years; it must be overlooked or confused with *G. dissectum*.

Lotus angustissimus

Christchurch Harbour (v.c. 11). This Red Data Book species is not found in v.c. 9 - the record in the Concise Flora is a patent error.

Fragaria moschata

N.E. of Cranborne, well established on remote roadside verge.

Crassula tillaea (Mossy Stonecrop)

Avon County Park; Fitzworth; Hyde Heath.

Chrysosplenium alternifolium (Alt. Leaved Golden Saxifrage)

Corscombe; Lower Kingcombe. Uncommon in Dorset, and only in the West.

Lythrum hyssopifolia (Grass Poly)

The first certain record for this, as earlier records may have been for alien species. Twenty or thirty plants were found near Charborough where it has appeared for at least 3 years in damp ruts at the edge of a field that is usually arable. The only other regular British records are from Cambridgeshire although it has been recently recorded from Sussex.

Oenanthe silaefolia (Narrow-leaved Water Dropwort)

West Morden. The only other post-war records for this plant are at Winfrith and near Lychett Minster. A good fen with *Juncus subnodulosus*, *Epipactis palustris* etc.

Bupleurum tenuissimum (Slender Hare's Ear)

Portland, north of Pulpit Inn, c. 20 plants in a very bare area, with *Thesium* sp. and *Linum* sp. It would be nice to think that this is Bowles Barrett's site – rough ground, N. side of Lower Light, abundant in 1876. The only other records for Dorset were around Weymouth (Lodmoor and Radipole) and at Tilly Whim (*Flora of Bournemouth*). Radipole is no longer suitable and the best site at Lodmoor is under the rubbish tip; it has not been seen there since 1950. To my knowledge there has been no record from Tilly Whim this century.

Apium inundatum (Marshwort)

Pond at Pamphill. Apart from records at Stoborough in 1980 and the Piddle Marshes in 1964, there are no post-war records for this unobtrusive plant which can look very like the Water Crowfoots. However, Prof. Good recorded it from 13 sites (all but two in the Poole Basin) and it must be overlooked – although most of those sites were ponds, which have suffered greatly in the last 40 years.

Euphorbia platyphyllos (Broad-Leaved Spurge)

Once a regular cornfield weed it is now only scarce and transient but easily overlooked. Many plants at Sherborne Tip.

Polygonum oxyspermum ssp. *raili*

Christchurch Harbour (v.c. 11) Has not been seen in v.c.9 for many years.

Polygonum bistorta (Bistort)

Lower Kingcombe and Cattistock.

Rumex crispus × *sanguineus*

Pamphill – a new county record.

Monotropa hypopitys (Yellow Birdsnest)

Sixpenny Handley. Although it sounds unlikely, this is only the second record since the war. Professor Good recorded it from the Little Bredy and from the North-East Chalk.

Gentianella anglica (Early Gentian)

Above Fossil Forest, abundant in several places; north of Grimstone; above Sydling. The last two are from completely new areas, and add to the recent records from Portland, from the coast from Winspit to Durlston, and inland on Fontmell. Reports from other counties suggest that this species is becoming distinctly rarer, so the Dorset populations are welcome and important.

Littorella uniflora (Shoreweed)

Creech Great Pond, abundant. Until the last war this was recorded quite frequently (Prof. Good, 11 records) but post-war records are few.

Senecio viscosus (Stinking Groundsel)

Russell Quay, Arne, a good colony in sand. The first country record for many years other than as a casual.

Senecio integrifolius (Field Fleawort)

Gussage Hill; Badbury Rings. Almost all the records for Dorset are from the N.E. Chalk, except for one for Lulworth (from 1908), one for Corfe (from 1983) and two by the NCC Chalk Grassland Unit for the Eggardon area in 1984. Any of these records would be worth refinding.

Baldellia ranunculoides (Lesser Water Plantain)

West Bexington. A second post-war record for West Dorset. Its headquarters are around Wareham and it was seen this year in several new locations on the Moors, near Arne, as well as near Furzebrook, in an old clay-pit. Also at Powerstock Common.

Ruppia cirrhosa (Spiral Tasselweed)

Poole Boating Lake, in abundance.

Leucojum aestivum (Summer Snowflake)

A search down the Stour this spring revealed stations for the plant at four places between Blandford and Wimborne with the possibility of two more stations to be investigated next year. In all

cases the plants were ssp. *aestivum*, as opposed to the garden species ssp. *pulchellum*. The two are easy to tell apart in the field – ssp. *aestivum* has a white, slightly toothed margin to the flowering stamen. The sites were at Langton Long, Charlton Marshall, Shapwick and Kingston Lacy.

Epipactis purpurata (Violet Helleborine)

Near Sturminster Newton, near Shaftesbury and near Buckland Newton. (See article in *Watsonia* 17 [1989] 441). The last Dorset record was from the second of the above sites, in 1926. The largest population is at the first site, growing in a different habitat, hazel coppice with oak standards, from the others which are beechwoods.

Hammarbya paludosa (Bog Orchid)

Stoke Heath. A very welcome extension of the recent range.

Carex demissa × *hostiana*

Bracketts Coppice – a new county record.

Vulpia ciliata ssp. *ambigua* (Bearded Fescue)

Gallows Hill Heath, S. of Bere Regis. This is the second inland record for this normally coastal grass. In Dorset the only coastal records since the war are either side of the Poole Harbour entrance at Sandbanks.

Puccinellia rupestris (Stiff Saltmarsh grass)

West Bay (another site to that recorded in 1988); Burton Freshwater, and Baiter, Poole. Growing on recently disturbed ground on all three sites.

Briza minor (Lesser Quaking Grass)

Rempstone, Redcliff and Middlebere. Mansell-Pleydell (1895) referred to this as common from Corfe to Swanage, but there are no recent records and the plant is very rare in Britain. To have three records in one year is excellent – the Redcliff and Middlebere records were for two plants only, but the Rempstone wheat field had good colonies over 300 yds.

Gaudinia fragilis

Short Cross to Marshwood. A very large population found on grassy banks of an old drove road. The only previous Dorset record was from Chickerell, also on clay, which now has been destroyed by building. The colony has a rich grass flora, together with *Ononis spinosa*, *Oenanthe pimpelleoides* and *Lathyrus nissiola*, and looks long established or even native – as do the populations just over the border in Somerset (for further details see articles in *BSBI* news No. 53 1989). It would be good to find it in other places in the area.

Alopecurus bulbosus (Bulbous Foxtail)

West Bay, Burton Freshwater, West Bexington, Abbotsbury, Rodden Hive, Lodmoor Ridge Wharf and Keyworth. A protracted search covering all the old sites, and most of the remaining suitable habitats (full details in *Watsonia* 18) (1990).

Alopecurus bulbosus × *geniculatus* (*A* × *pletkei*)

Burton Mere, West Bexington and Abbotsbury, the last confirming a recently redetermined collection of J. Lousley from 1932.

ALIENS

Polystichum falcatum

Portland, a garden wall at Chesilton, 2 clumps. New county record.

Amaranthus hybridus (Green Pigweed)

Maiden Newton; of birdseed origin, growing with *Panicum miliaceum*; Empool, rubbish dumps, but abundant and well established.

Amaranthus retroflexus

Corfe Mullen, with maize; Hanford.

Abutilon theophrasti

2 arable fields at Chamberhayes and Puncknowle. New county record.

Trifolium incanatum (Crimson Clover)

Winterborne Zelston, 1 plant in kale field, 1st record since 1950.

Myrrhis odorata (Sweet Cicely)

Hedgebank near Bloxworth, possibly planted. New county record.

Elodea nuttallii

Stoborough meadows.

Lagarosiphon major

Claypit near Furzebrook, dominant. New county record.

Lysichiton americanus (Skunk cabbage)

Wootton Fitzpaine – well naturalized by stream.

Lemna minuscula

Dorchester, Kingston Maurward, Moreton and E. Stoke. Abundant in R. Frome. Although the first record for this aquatic was only last year, it seems to be spreading very rapidly. Experience suggests that as it propagates faster than the other duckweeds,

it swamps them in spite of being much smaller. It has a more grey-green colour and a dense root system.

Bromus tectorum (Drooping Brome)

Abundant on Wareham southern by-pass.

Bromus inermis

Baiter, Poole, waste ground.

Bromus Carinatus

Blandford, bridge over R. Stour.

CLATHRUS CANCELLATUS Latticed or Caged Stinkhorn

R. S. BAKER

In 1985 an example of this very rare and poisonous fungus was noted by the writer in his garden at 91, South Court Avenue, Dorchester since which time the number has increased annually. In 1989 eight were observed, from Spring to late October.

Information received from Dorset Environmental Records Centre indicates that only one other siting has been recorded in Dorset, that being at Durlston Country Park, Swanage during 1985.

Upon emerging from the soil the fungus resembles a puffball but the outer white skin splits, revealing a bright orange interior. A spherical latticed network emerges containing a foetid mucus which is avidly fed upon by flies and insects. When empty the receptacle, which can measure 4 by 3½ inches, collapses.

LAND ARTHROPODS

N. R. WEBB

This report has been compiled mainly from records sent to the Dorset Environmental Records Centre and I am grateful to Richard Surry for his help. Some records have been sent directly to me while others have been obtained by abstracting the entomological journals. The report includes records from: M. Bennett, C. R. Bristow, A. Brokenshire, K. Clarke, M. Collier, J. R. Cox, B. Edwards, C. M. Elliott, P. Ensom, C. Hart, M. H. Lock, A. Mahon, A. Marsh, M. G. Morris, S. J. Morrison, D. Pearman, N. Spring, R. J. Surry, J. Teagle, W. G. Teagle, R. M. Walls, N. R. Webb, P. White, and J. Wood.

Orthoptera

A good number of records of grasshoppers and crickets have been received. This is a relatively straightforward group of insects to identify and for which there is a number of excellent field guides. DERC will be continuing its recording project in the coming year.

Oak Bush Cricket (*Meconema thalassinum*). Charborough, Dorchester and Burton Bradstock.

Great Green Bush Cricket (*Tettigonia viridissima*). Stoborough, Tolpuddle, Crupton, Broadwey, West Bexington, Worgret, Toller Porcorum, Portland, Wool, Gallows Hill, Wareham, Ballard Down, Burton Beach, Cross Dyke, Askerswell, Vinney Cross, Innsacre Quarry, Sheepfold, Wytch, Allington Hill and Broadcroft Quarry.

Wart Biter (*Decticus verrucivorus*). Not reported this year.

Dark Bush Cricket (*Pholidoptera griseoptera*). Catheston Leweston, Batcombe, Melbury Abbas, Barrowland Lane, Powerstock Common, Kingcombe, Throop Heath, Bere Wood, Morden, Wareham Common, Charborough Park, Burton Bradstock, West Bexington, Stour Row, Litton Cheney, Bridehead, Bridport, Allington Hill, Shipton Gorge, Abbotsbury, Burton Common, Beacon Hill, West Hill, Merritown Heath, Briantspuddle and Elworth Farm.

Grey Bush Cricket (*Platycleis denticulata*). Sopley Common, Turbary Common, Canford Heath, Buddens Farm, Worgret Heath, Church Ope and Burton Bradstock.

Bog Bush Cricket (*Metrioptera brachyptera*). Sopley Common, Turbary Common, Canford Heath, Buddens Farm, Sandford, Worgret, Hyde Heath, Stoke Heath, Arne, Studland, Merritown Heath, Moreton Pit and Parley Common.

Short-winged Conehead (*Conocephalus dorsalis*). Morden Bog, Wareham Common, Arne, Studland, Leeson House.

Long-winged Conehead (*Conocephalus discolor*). Sopley Common, Turbary Common, Canford Heath, Buddens Farm, Binnegar, Worgret, Uddens Heath, Badbury Rings, Bere Wood, Woolsbarrow, Black Heath, Morden Park, Higher Hyde, Wareham Common, Stoborough, Studland, Wytch and Parley Common.

Speckled Bush Cricket (*Leptophyes punctatissima*). Bloxworth, Stoke Heath, Wareham, Dorchester and Stour Row.

Mole Cricket (*Grylotalpa gryllotalpa*). Despite intensive observations at the site where this insect was reported in 1988 it was not located.

Large Marsh Grasshopper (*Stethophyma grossum*). Morden Bog, Lower Hyde Heath, Higher Hyde Heath, Stoborough, Wytch and Oakers Bog.

Stripe-winged Grasshopper (*Stenobothrus lineatus*). Fontmell Down, Charborough Park, Badbury Rings and Ballard Down.

Woodland Grasshopper (*Omocestus rufipes*). Bere Wood and Bloxworth.

Heath Grasshopper (*Chorthippus vagans*). Sopley Common, Morden Bog, Studland and Merritown Heath.

Slender Ground Hopper (*Tetrix subulata*). Lydlynch Common.

Odonata

The intensive transect recording by J. R. Cox at Studland Heath National Nature Reserve continued for a twelfth season during 1989. A number of changes were noted in the seventeen species regularly recorded including decreases in two species and increases in three species. Three other species were noted bringing the total to 20. The following is a summary of his observations.

Small Red Damselfly (*Ceriagrion tenellum*). A slight fall for the second season running, but numbers remain above the average for 1978-87. First seen 29 May; last seen 24 August.

Azure Damselfly (*Coenagrion puella*). Little change from last year, still higher numbers since 1980. First seen 2 May; last seen 10 July.

Common Blue Damselfly (*Enallagma cyathigerum*). A slight decrease in 1989 after four successive years of increase; still above the average for 1978-87. First seen 6 May; last seen 4 October.

Large Red Damselfly (*Pyrrhosoma nymphula*). A substantial increase in 1989 brings numbers to their highest since 1982. Exceptionally early emergence with the first individual seen on 2 April followed by several on 8 April – some ten days earlier than previous records. Last seen 12 July.

Blue-tailed Damselfly (*Ischnura elegans*). A drop in numbers by about a quarter on last year's brings it to the lowest for the twelve year period. First seen 2 May; last seen 24 August.

Emerald Damselfly (*Lestes sponsa*). A slight drop in numbers to the lowest for twelve seasons but sample counts are small. First seen 18 June; last seen 12 August. Usually seen into September but perhaps the dry summer affected numbers later in the season.

Hairy Dragonfly (*Brachytron pratense*). No significant change in numbers. First seen 23 April; last seen 19 June.

Southern Hawker (*Aeshna cyanea*). A drop in numbers to the second lowest figure since 1978. First seen 8 July; last seen 12 October.

Brown Hawker (*Aeshna grandis*). A female seen on 6 August ovipositing at the edge of the Little Sea. The first attempted breeding record for Purbeck.

Common Hawker (*Aeshna juncea*). A small rise in numbers, but always scarce on the census route. First seen 8 July; last seen 30 August.

Migrant Hawker (*Aeshna mixta*). A big increase (31 sightings) in producing the highest numbers recorded since 1978. First seen 6 August; last seen 18 October.

Emperor Dragonfly (*Anax imperator*). Not recorded along the census route but seen around Little Sea and on Godlingston Heath from 28 May until 17 July.

Downy Emerald (*Cordulia aenea*). A drop of about one third from last year's numbers but about average numbers for the eleven year period. First seen 2 May; last seen 12 June.

Black-tailed Skimmer (*Orthetrum cancellatum*). Little change in numbers, if anything a slight increase. First seen 28 May; last seen 6 September.

Keeled Skimmer (*Orthetrum coerulescens*). A decrease, but the numbers recorded are small. First seen 17 June; last seen 7 September.

Broad-bodied Chaser (*Libellula depressa*). Only a single record from Little Sea by C. E. Olliphant. It is usually more numerous on Godlingston Heath.

Four-spotted Chaser (*Libellula quadrimaculata*). This species showed a good increase this year taking numbers to the third highest since counting began in 1978. First seen 2 May; last seen 17 July.

Black Darter (*Sympetrum danae*). A drop in numbers in 1989 to the lowest count since recording began in 1978, but the numbers recorded are small. Could be an effect of the dry summer on the Sphagnum bog pools. First seen 17 June; last seen 9 August.

Ruddy Darter (*Sympetrum sanguineum*). Little change. First seen 12 June; last seen 30 August.

Common Darter (*Sympetrum striolatum*). A fall in numbers by about a third to almost the lowest numbers since recording began in 1978. First seen 17 June; last seen 12 November.

Coleoptera**Coccinellidae (Ladybirds)**

There have been a large number of records for this popular and easily identified group of insects. The DERC recording project will continue in the forthcoming year and as many records as possible are required.

18 spot Ladybird (*Myrrha 18-guttata*). Leeson House and Gore Heath.

24 spot Ladybird (*Subcoccinella 24-punctata*). Leeson House.

Scymus frontalis. Gore Heath.

22 spot Ladybird (*Psyllobora 22-punctata*). Leeson House, Elworth Farm, Gore Heath, Burton Bradstock, Frome St Quinton, Wareham, Woodsford and Tincleton.

14 spot ladybird (*Propylea 14-punctata*). Leeson House, Studland Beach, Bridehead, Kingcombe, Dorchester, Wareham, Stoborough and Worth Matravers.

Cream-spot ladybird (*Calvia 14-guttata*). Leeson House, Zig-Zag Hill and Stoborough.

Kidney-spot Ladybird (*Chilocorus renipustulatus*). Leeson House, Studland Heath, Wareham, Corfe Common, Stoborough Heath, South Middlebere, Troublefield.

Heather ladybird (*Chilocorus bipustulatus*). Arne and Wareham.

Orange Ladybird (*Halyzia 16-guttata*). Leeson House.

16 spot Ladybird (*Micrapis 16-punctata*). Leeson House, Burton Bradstock and Dorchester.

2 spot ladybird (*Adalia 2-punctata*). Leeson House, Burton Bradstock, Dorchester, Wareham, Scotland Farm, Castle Park and Milborne St Andrew.

10 spot Ladybird (*Adelia 10-punctata*). Leeson House, Burton Bradstock, Wareham and Herston.

11 spot Ladybird (*Coccinella 11-punctata*). Burton Bradstock, Dorchester, Worgret, Wareham and Castle Park.

7 spot Ladybird (*Coccinella 7-punctata*). Reported from 122 localities.

Rhyzobius litura. Leeson House and Dorchester.

Striped Ladybird (*Myzia oblongoguttata*). Arne and Stoborough.

Pine Ladybird (*Exochromus 4-pustulatus*). Studland Heath, Arne and Stoborough.

Cream-streaked Ladybird (*Harmonia 4-punctata*). Arne and Hurn.

Water Ladybird (*Anisosticta 19-punctata*). Hurn Court.

Other Coleoptera

Glowworm (*Lampyrus noctiluca*). Kingcombe, West Bexington, Portland and Studland.

Lesser Stag Beetle (*Dorcus parallelipedus*). Ulwell and Dorchester.

Agrilus viridis. Sandy's Hill: a Red Data Book species new to the County reported in 1988.

Omophlus rufitarsis. This beetle was known in Britain only from Chesil Beach and occurs on the flowers of Thrift (*Armeria maritima*). It was last recorded in 1926 and thought to be extinct, but in 1989 a group of coleopterists located about 100 individuals on Chesil Beach.

Coniocleonus nebulosus. This rare weevil was reported from Studland Heath NNR.

Diptera

Apart from the hoverflies (*Syrphidae*) for which there are separate reports this is a difficult and poorly recorded group of insects.

Robber Fly (*Asilus crabroniformis*). Allington Hill and Corfe Common.

Hymenoptera

Hornet (*Vespa crabro*). Nests reported from South Middlebere, Furzebrook (2) and Langton Matravers; workers noted at Stoborough.

Pseudepipona herrichii. This rare mason wasp occurs on Studland Heath where it has been known since the 1920s. Colonies were located again in 1989.

Araneae

Raft Spider (*Dolomedes fimbriatus*). Povington Heath, Stoke Heath and Oakers Bog.

Argiope bruennichi. Canford Heath, Studland and Sandford.

DORSET SYRPHIDAE 1989

E. T. & D. A. LEVY and W. F. DEAN

Fifty different localities were visited during the year, over half of them for the first time, in the task of hoverfly recording. Priority was given to chalkland habitats such as Sovell Down, Melbury Down and Fontmell Down, since these county squares were poorly covered in previous years.

131 species of hoverfly were recorded in 1989: one of them *Epistropella euchromus* was new to the county list and was taken by Bill Dean in a wood near Wimborne. Four other species worthy of special mention because of their very rare occurrence in Dorset are *Epistrophe diaphana* (Sovell Down), *Psilota anthracina* (Brackets Copse), *Lejogaster splendida* (Rempstone Heath) and *Didea intermedia* (Brownsea Island). New sites were found for the rather scarce *Melligramma gutata*, *Parasyrphus vittiger*, *Platycheirus tarsalis* and *Criorhina ranunculi*.

More recording was done this year in DTNC and NCC reserves and *Dasysyrphus lunulatus* was added to the Studland List.

Neither *Eoseristalis cryptarum* or *Chrysotoxum octomaculatum* have been found in their previous localities and it is now 15 years since the latter occurred in Dorset, where a few southern heath sites were its sole distribution in the British Isles. However, the search will continue.

Two Chalkland species we had hoped to find in Dorset have also eluded us and they may well be limited in distribution to eastern Hampshire. One of them *Microdon deviius* has we think a very short flight period which makes the timing of our visit to the right habitats the more difficult since we are limited to weekends only.

Our thanks to DTNC, RSPB and NCC wardens for access permits. Fuller separate reports have been sent to each to cover their reserves.

Hartland Moor National Nature Reserve

Three visits were made to this area during July and August. Most of the time was spent in the vicinity of Slepe Farm where there is a selection of heath, bog and stream, and hedgerow scrub habitats.

<i>Melanostoma mellinum</i>	(30.7.89 & 12.8.89)
<i>Platycleirus albimanis</i>	(30.7.89)
<i>Platycheirus clypeatus</i>	(30.7.89)
<i>Platycheirus scutatus</i>	(30.7.89)
<i>Pyrophaena granditarsus</i>	(30.7.89)
<i>Episyrphus balteatus</i>	(6.8.89 & 12.8.89)
<i>Leucozona glaucius</i>	(6.8.89)
<i>Metasyrphus corollae</i>	(30.7.89 & 6.8.89)
<i>Metasyrphus latifasciata</i>	(6.8.89)
<i>Metasyrphus luniger</i>	(6.8.89)
<i>Scaeva pyrastris</i>	(30.7.89)
<i>Sphaerophoria scripta</i>	(30.7.89 & 6.8.89)
<i>Syrphus vitripennis</i>	(30.7.89)
<i>Xanthogramma pedissequum</i>	(12.8.89)
<i>Eoseristalis arbustorum</i>	(12.8.89)
<i>Eoseristalis horticola</i>	(30.7.89 & 12.8.89)
<i>Eoseristalis nemorum</i>	(12.8.89)
<i>Eoseristalis pertinax</i>	(30.7.89)
<i>Eristalis tenax</i>	(30.7.89, 6.8.89 & 12.8.89)
<i>Helophilus pendulus</i>	(6.8.89 & 12.8.89)
<i>Sericomyia silentis</i>	(12.8.89)
<i>Syrpitta pipiens</i>	(30.7.89, 6.8.89 & 12.8.89)

Studland Heath Reserve

Three visits were made to the reserve this year, on April 9th, May 13th and July 21st. The areas we covered were Piplely Wood, Three Acre Wood, Twelve Acre Wood, Wood Marsh, Bramble Bush Bay and Third Ridge.

40 species were recorded but once again we failed to find *Eoseristalis cryptarum*, *Chrysotoxum octomaculatum* and *Sphaerophoria loewii*, the three main species we have targeted, that Capt. Diver recorded in the 1930s. Nor, despite an early search of *Prunus* blossom on April 9th, did we find *Pachysphyria ambiguum*, which we feel sure will eventually be recorded on the reserve. Its flight period varies to coincide with Blackthorn blooms and was earlier than expected this year.

One new hoverfly species was recorded – *Dasysyrphus lunulatus* was found in Piplely Wood on May 13th. On the same date we again found the handsome carder-bee mimic *Criorhina floccosa* feeding at Hawthorn blossom. This blossom being so early that it was virtually devoid of hoverflies which normally are attracted to it. Last

year the same bushes were buzzing with *Volucella* species which tend to emerge in June.

Studland Village to Old Harry Rocks Cliffwalk

This first visit on June 4th was occasioned by a record from Dr Martin Speight, of the hoverfly *Chrysotoxum octomaculatum* in the 1960s, along what he described as the Studland undercliffs. Unfortunately we failed to find this rare species but the visit was nevertheless quite rewarding.

35 species were recorded along the walk and in the wood close to the famous rocks. It is interesting that two of the hoverflies found here have yet to be seen on Studland Reserve, though neither is especially rare in Dorset.

I was particularly delighted to see several *Chrysotoxum cautum*, the handsome wasp-mimic flying busily among the best wild floral display of Corn Marigolds that I have seen for many years.

Brownsea Island

A visit was made to the Dorset Trust for Nature Conservation reserve on August 19th. I was somewhat pessimistic of seeing many species of hoverflies due to the reduced number of flora on the island at this time of the year and the first two hours were spent searching the small groups of heather, ragwort, burdock and thistle. The foreshore had a few sprigs of Sea Lavender and a damp corner near The Villa had several clumps of Tormentil. When I moved out of the reserve boundary fence only eleven species had been listed. However I later noticed a large area of Common Fleabane on a small marshy corner which was signposted as part of the reserve. The sun was shining directly onto the yellow blooms and here I spent a further hour recording the many hoverflies busily visiting the flowers. Our thanks to DTNC and Warden Kevin Cook for access permits.

<i>Platycheirus albimanis</i>	<i>Eristalinus sepulchralis</i>
<i>Dasytyrphus albostrigatus</i>	<i>Eoseristalis arbustorum</i>
<i>Dasytyrphus tricinctus</i>	<i>Eoseristalis horticola</i>
<i>Didea fasciata</i>	<i>Eoseristalis intricarius</i>
<i>Didea intermedia</i>	<i>Eoseristalis nemorum</i>
<i>Episyrphus balteatus</i>	<i>Eristalis tenax</i>
<i>Metasyrphus corollae</i>	<i>Helophilus pendulus</i>
<i>Metasyrphus latifasciatus</i>	<i>Myathropa florea</i>
<i>Syrphus ribesii</i>	<i>Eumerus strigatus</i>
<i>Cheilosia berganstanami</i>	<i>Sericomyia silentis</i>
<i>Neoascia tenur</i>	<i>Syritta pipiens</i>
<i>Eristalinus aeneus</i>	<i>Xylota segnis</i>

LEPIDOPTERA

ALAN T. BROMBY

Records were received from the following field workers:

A. T. Bromby, J. R. Cox, A. H. Dunn, G. G. Eastwick-Field and K. Howes.

Particular thanks are due to the staff of the Dorset Environmental Records Centre.

Mr Eastwick-Field has been running a M.V. Trap in the Luscombe Valley Nature Reserve, Parkstone, and I have his permission to include some of his more interesting records in this report.

Mr K. Howe has kindly supplied records of migratory species taken by various visiting entomologists at Durlleston Country Park in 1989, including thirteen examples of a moth new to the British List: *Thera cupressata*, Cypress Carpet.

The nomenclature and taxonomic order in this report are generally in accordance with *An Indexed List of British Butterflies & Moths* by J. D. Bradley and D. S. Fletcher (1986).

Udea ferrugalis Hb. Swanage 9.8., then 71 between 23.9. & 7.11. (K.H.). Luscombe Parkstone 18.11. (G.G.E-F.). Parkstone 28.9. & 9.10. (A.T.B.).

Nomophila noctuella D & S. Rush Veneer. Swanage 9.8. 24 between 23.8. & 27.8. followed by 66 records in October (K.H.) Luscombe Parkstone 9.10. (G.G.E-F.); Parkstone 5 in early October (A.T.B.)

Palpita unionalis Hb. Swanage 19 between 22.10. & 29.10. (K.H.) *Colias croceus* Geoff. Clouded Yellow. 28 recorded by various observers between 19.7. & 17.10. (DERC) Weymouth 11.8. & Bridport 2 on 18.8. (A.H.D.) Parkstone 11.8. & 21.8. (A.T.B.).

Celastrina argiolus Linn. Holly Blue. Earliest Swanage 28.4.; a good year for this species with many subsequent records for both broods. (various observers).

Cynthia cardui Linn. Painted Lady. Some 70 records – 9 between

24.5. & 30.7. followed by 50 in August, 4 in September, 2 in October and latest 6.11.; larvae Stoborough 8.9. (DERC).

Cyclophora pendularia Cl. Dingy Mocha. Luscombe, Parkstone 14.7. (G.G.E-F.).

Rhodometra sacraria Linn. The Vestal. Swanage 22.7., 4.9., 9.10., 3 on 23.10., 25.10. & 29.10. (K.H.) Luscombe, Parkstone 2 females on 21.7. (G.G.E-F.).

Thera cupressata. Cypress Carpet. Swanage 2 on 30.9., 1.10., 3 on 9.10., 17.10., 2 on 23.10., 3 on 24.10., 25.10. (K.H.).

Rheumaptera undulata Linn. Scallop Shell. Luscombe, Parkstone 10.7. (G.G.E-F.).

Eupithecia inturbata Hb. Maple Pug. Luscombe, Parkstone 14.7. (G.G.E-F.).

Eupithecia phoeniceata Ramb. Cypress Pug. Parkstone 8.9. (A.T.B.). Luscombe (G.G.E-F.).

Pachycnemia hippocastanaria Hb. Horse Chestnut. Luscombe, Parkstone 2 on 26.1. (G.G.E-F.).

Agrius convolvuli Linn. Convolvulus Hawk-moth. Swanage 2 on 29.8., 31.8., 6.9., 4 between 21.9. & 24.9., 1.10. & 8.10. (K.H.)

Hemaris fuciformis Linn. Broad-bordered Bee Hawk-moth. Corfe Mullen, 23.9. (A.H.D.).

Macroglossum stellatarum Linn. Humming-bird Hawk-moth. 52 recorded by various observers – earliest 6.6. – latest 4.10. with peak numbers in August and early September.

Hippotion celerio Linn. Silver-striped Hawk-moth. Swanage 26.9. (A.H.).

Leucoma salicis Linn. White Satin Moth. Luscombe, Parkstone, 14.7. (G.G.E-F.).

Eilema deplana Esp. Buff Footman. Luscombe, Parkstone 13.7. & 21.7. (G.G.E-F.).

Callimorpha dominula Linn. Scarlet Tiger. Luscombe, Parkstone 14.7. (G.G.E-F.). Stubbampton 8.7. (A.H.D.).

Agrotis ipsilon Hufn. Dark Sword Grass. Swanage 3 on 31.3., 13.4., 2 on 19.4. 26 between 3.4. & 16.5, then 225 in July, 150 in August, 467 in September, 204 in October, & 12 between 2.1. & 19.11. (A.H.) Parkstone 5 in early September (A.T.B.).

Peridroma saucia Hb. Pearly Underwing. Swanage 3 on 25.5. then 8 in August, 77 in September, 112 in October & 4 in November, (A.H.) Parkstone 7 between 20.9. & 15.10. (A.T.B.)

Mythimna albipuncta D & S. White Point. Swanage 2 on 30.8., 1.9., 6.9., 2 on 24.9., 26.9., followed by 37 records in October (A.H.); Luscombe, Parkstone 9.10. (G.G.E-F.).

Mythimna vitellina Hb. The Delicate. Swanage 22.8., 25.9., 10.10., 24.10., 25.10., 28.10. & 30.10. (A.H.)

Mythimna l-album Linn. L-album Wainscot. Swanage 23 between 29.8. & 31.8. then 251 in September & 37 between 11.10. & 23.10. (A.H.)

Mythimna unipuncta Haw. White-speck. Swanage 15 between 24.9. & 30.9. followed by 57 records in October (A.H.).

Mythimna obsoleta Hb. Obscure Wainscot Luscombe, Parkstone 30.6. & 5.7. (G.G.E-F.)

Mythimna loreyi Dup. The Cosmopolitan. Swanage 10.10., 2 on 25.10., 29.10. & 30.10. (A.H.).

Euchmichtis lichenea Hb. Feathered Ranunculus. Parkstone 22.9. & 27.9. (A.T.B.).

Phlogophora meticulosa Linn. Angle Shades. Abundant in September & October (various observers).

Archanara geminipuncta Haw. Twin-spotted Wainscot. Luscombe, Parkstone 27.7. (G.G.E-F.).

Chilodes maritimus Tausch. Silky Wainscot. Luscombe, Parkstone 4 taken in 1989 (G.G.E-F.).

Heliothis armigera Hb. Scarce Bordered Straw. Swanage 24.9., 27.9., 28.9., 2 on 24.10. (A.H.).

Earias clorana Linn. Cream-bordered Green Pea. Luscombe, Parkstone 2 on 9.6. (G.G.E-F.).

Autographa gamma Linn. Silver Y. Not a good year for the species. Swanage 4 records in May, 6 in June, & 72 in July, 97 in August, 199 in September, 141 in October & 4 in November.

BUTTERFLIES IN PURBECK 1989

J.L.I.R. BAISS

The warm winter and wonderful summer caused many species to emerge early, for instance the first Speckled Woods in late March, but, because of daily sunshine, individuals had a short flight period and some species disappeared earlier than usual. We expected a good Cross-Channel migration under the favourable conditions, but, among the migrant butterflies no great rarities were recorded. A small influx of red Admirals occurred as early as late March and

a few Painted Ladies were seen in late April and May; both species were common in the late summer. But I heard of no Clouded Yellows until early August and there were not very many then although two very late ones were on the Durlston cliffs on November 5th and one on 7th (arriving or returning?).

It was a great year for Holly Blues, whose second brood seemed to be exploring every high hedgerow and woodland. Wall Browns and Small Coppers were abundant in late summer; some lingered until the second half of October. Skippers were over early, but more Grizzled than usual were seen at Durlston, while a fresh Dinky of a second brood was recorded on August 16th. Several specimens were also seen of a second brood of Silver-Studded Blues in September.

White Admirals were only seen in Purbeck on the Studland Reserve and were well below average there. The two large Fritillaries were also down in numbers. The existence of a small colony of Small Pearl-Bordered Fritillaries on the edge of the Isle of Purbeck Golf Course was confirmed; they were also found to be quite common between Creech and East Lulworth within the Tank Ranges. Graylings were widespread and wandered well away from their normal habitats. They were seen on at least four Buddleias from Langton to Durlston.

The most noteworthy find was a small colony of White-Letter Hairstreaks on a group of Wych Elms which had escaped the disease in the Purbeck Wealden Valley.

MOTHS AT DURLSTON, SWANAGE

J. LI. R. BAISS

In 1989 the Wardens of Durlston Country Park have for the first time operated a regular Moth Trap in the Country Park. In the course of the year from March 31st the Trap has recorded 248 species of Macro-Lepidoptera. This is not the first trap in the area. Many visiting entomologists have operated temporary Traps at Durlston since the War and the success of the official Trap caused more entomologists than ever to descend on the Park with their lights in 1989. On one night in August no fewer than 16 were operating. It must be emphasised that the rules of the Park do not permit the collection of moths: they must be released after identification. Doubtless some return again and again and the numbers are not necessarily different individuals.

The great attraction of the area, apart from the undisturbed wild habitat along the coast, is that it is the first landfall for rare immigrants from the Continent. The history of its Moth Traps goes back well beyond the War to A. G. B. Russell, the then Lancaster Herald, who built Scarbank House in South Swanage, half a mile from the present Park Centre. He lived there from the thirties to his death in 1955 and built a small wooden room on the flat eastern roof of his house expressly as a Moth Trap. This operated from 1934 for some twenty years excluding the War years. It was entered by a full-sized door. One side was against the house roof, but the other three were mainly glass, leading by funnels into the white-washed interior where several powerful bulbs dangled from the ceiling. When he was at home the bulbs were left on all night; he would then enter in the morning and identify the insects resting on the walls, taking those he wanted for his collection. In those days there were none of the egg boxes of the modern traps where the moths can rest quietly out of the glare. I regret to say that those he did not require were sometimes swept out with a broom! I was a friend of his sons, both killed in the Far East in the War; on the better nights we and other entomological friends of the family would stand around on the roof catching moths which did not enter the Trap.

A. G. B. Russell was the Entomological correspondent of the Society from 1934 to 1954 and President of the Society from 1947-50. One of his Presidential Addresses was on the Annus Mirabilis for Lepidoptera of 1947 when many rare Continental immigrants turned up in Dorset. In his Address he stated that the Isle of Purbeck 'is probably, taking it all round, the richest area in the country [for moths]. My Light Trap, moreover, stands high in a central coastal position and is doubtless favoured by the near presence of a Lighthouse, which attracts straying insects into the district. I have myself taken, in Purbeck alone, some 450 species of Macro Lepidoptera, exclusive of butterflies ... about 380 of these, that is nearly half the British list, I have taken within the limits of my own grounds.' These would have been almost entirely in his Moth Trap which was for most of his time operated only at weekends, when he was at home. Among Russell's many rare captures was the first specimen for Britain of *Ctenoplusia limberina* Guen. in 1947; it was named after his house The Scarbank Gem. Even in those days

there was another Trap in the area. Russell encouraged an entomological friend, Professor Sir Beckwith Whitehouse from Birmingham, to take as a summer cottage in the thirties, The Quest, the nearest house in those days to Scarbank. A friendly rivalry existed between the two collectors who tended to raise their wattage in turn!

It should be pointed out that modern Traps are Mercury-Vapour which have a far more powerful attraction to moths than the electric bulbs of Russell's time. All the same it would be very interesting to compare the records from the Country park in the Nineties with those from Scarbank in the thirties. Unfortunately it was only the rarer or otherwise more interesting captures which Russell recorded in the *Proceedings*. He bequeathed his collection to the Society, but among the papers with it there is no list of the 380 species taken within his grounds. The 1989 Park Records, however, together with those of visiting Lepidopterists, are already on Computer and available to those interested.

Three 1989 captures which were certainly not recorded by Russell were three Cypress feeders. The rarest was the Cypress Carpet, *Thera cypressata*, of which thirteen specimens were recorded in various traps. Only three have previously been recorded in Britain, one of which was at Studland. Three specimens of the Cypress Pug, *Eupithecia phoeniceata*, Ramb., were recorded. This moth was first captured in Britain in 1959 in Cornwall; it has now spread all along the South Coast. 24 specimens of the third Cypress feeder appeared in Traps. This was Blair's Shoulder Knot, *Lithophane leautieri*, Boisd., which was first recorded in the Isle of Wight in 1951 and is now well established in southern England. Perhaps these species are following the large number of Cypresses into Garden Centres and British gardens?

The other 1989 Durlston records which I shall list come under three headings:

All the Hawk Moths (Sphinginae):

Convolvulus Hawk, *Agrius convolvuli*, L. Fifteen.

Privet Hawk, *Sphinx ligustri*, L. Twelve.

Lime Hawk, *Mimas tiliae*, L. Three.

Eyed Hawk, *Smerinthus ocellata*, L. One.

Poplar Hawk, *Laothoe populi*, L. Sixteen.

Elephant Hawk, *Deilephila elpenor*, L. One.

Small Elephant, *Deilephila porcellus*, L. Sixty-six.

Silver-Striped Hawk, *Hippotion celerio*, L. One. (This specimen was taken in the trap of Mr Bernard Skinner on Sept. 26th. Mr Skinner's book, *Moths of the British Isles* (1984) is being used for order and nomenclature in this report).

The rarer immigrants, although, as for butterflies, it was not a particularly good year for immigrants.

The Vestal, *Rhodometra sacaria*, L. Seven. A.G.B.R. mentions this moth in three seasons.

White-Point, *Mythimna albipuncta*, D. & S., Forty. A.G.B.R. also mentions this moth in three seasons.

The Delicate, *Mythimna vitellina*, Hb., Four. A.G.B.R. has many records.

White-Speck, *Mythimna unipuncta*, Haw. Seventy-three. A.G.B.R. describes it as a rare immigrant with only 6 Dorset specimens by 1938. I can find no post-war reference to it by A.G.B.R.

The Cosmopolitan, *Mythimna loreyi*, Du. Five. Not recorded from Dorset until 1975.

Scarce Bordered Straw, *Heliothis armigera*, Hb. Five. A.G.B.R. recorded only two at Scarbank.

Some of the more local and more surprising of non-migratory species:

Leopard Moth, *Zuzera pyrina*, L., One. A.G.B.R. records only two.

Purple Bordered Gold, *Idaea muricata*, Hufn. one. A heathland insect not mentioned by A.G.B.R.

Dotted Border Wave, *Idaea sylvestriaria*, Hb. Three. Another heathland insect not mentioned by A.G.B.R.

White-Spotted Pug, *Eupithecia tripunctaria*, H.-S. Three. No mention by A.G.B.R.

Purple Thorn, *Selenia tetralunaria*, Hufn. Nine. Very rarely taken by A. G. B. R.

Lunar Marbled Brown, *Drymonia ruficornis*, Hufn. One. Said by A.G.B.R. to be rare in Dorset and only two in his trap.

Scarce Footman, *Eilena complana*, L. Nine. 'Usually uncommon' A.G.B.R.

Cream-Spot Tiger, *Arctia villica* L. Fifteen. A very attractive local speciality.

Kent Black Arches, *Meganola albula* D. & S. One. A.G.B.R. only knew of 6 Dorset records of which 3 were at Scarbank.

Large Yellow Underwing, *Noctua pronuba*, L. This was the

commonest species in the Park Moth Trap, in which alone 4970 were recorded, 3025 of them in July. The first was on April 13th and the last on November 13th.

True Lover's Knot, *Lycophotia porphyrea*, D. & S. Three. A common Heather moth, but not recorded at Scarbank.

Neglected rustic, *Xestia castanea*, Esp. Three. Another Heather moth. A.G.B.R. records two at Scarbank with surprise.

Heath Rustic, *Xestia agathina*, Du. One. Also a Heather moth; not recorded by A.G.B.R.

Pale Shining Brown, *Polia bombycina*, Hufn. Sixteen. Unmentioned by A.G.B.R.

Beautiful Gothic, *Leucochlaenia oditis*, Hu. Thirteen. A.G.B.R. mentions this as quite common at Scarbank, but this is a very local species for which the Purbeck coast is a recognised locality.

Brindled Ochre, *Dasypolia templi*, Thunb. Nineteen. Another local species seen regularly by A.G.B.R. in very small numbers.

Feathered Brindle, *Aporophyla australis*, Boisd. 424 specimens recorded in the traps. A.G.B.R. also records it in some years in considerable numbers.

Feathered Ranunculus, *Eumichtis lichenea*, Hu. 143 trapped. A local species which again was recorded in some numbers by A.G.B.R.

Small Wainscot, *Photodes pygmina* Ha. One. A.G.B.R. also recorded only one.

Large Wainscot, *Rhizedra lutosus*, Hu. Nine. A.G.B.R. recorded it in some years in considerable numbers, but was at a loss over its origin as it breeds in reed beds.

I am much indebted to the Durlston Park Wardens for the use of their records.

DO BUTTERFLIES FLY SOUTH FOR THE WINTER?

S. McGRORTY

On Sunday, 12th November, 1989, while fishing from the Chesil beach at Abbotsbury, I saw a number of Red Admiral and Peacock butterflies flying out to sea. Of course these species are often seen flying during mild weather quite late in the year and insects often fly out over the sea, but two points seemed to me unusual. The first was the number of butterflies, at least twenty Red Admiral and two Peacocks in the hour between 1430 and 1530h. Secondly, they were all flying determinedly south across a gusty easterly breeze and continued to do so until out of sight. This prompted me to ask if the butterfly species which migrate north over the English Channel in the spring also return to the continent in the autumn? While there have been many observations of southerly flights over land in the autumn, there seem to have been very few of them flying out to sea. Perhaps other readers have made similar observations?

MOORS VALLEY COUNTRY PARK. EFFECTS OF CONSTRUCTION ON LOCAL ODONATA POPULATIONS.

E. D. V. PRENDERGAST

Introduction

In summer 1985, work was started on the first phase of East Dorset District Council's plan to create a country park in the valley of the Moors River, centred around King's Farm (SU 104050), 5km west of Ringwood.

The Moors River (known as the Crane in its upper reaches) rises from the chalk near Cranborne, some 10km to the north. After passing the west edge of the expanding town of Verwood, it flows through reclaimed meadows to be joined ½km north of King's Farm by a minor tributary, the Ebblake Stream, from the east. This stream originates in the heathlands of Ringwood Forest and flows past an industrial estate, to which it gives its name, on the east edge of Verwood. The waters of the Ebblake Stream are acidic, but of insufficient volume to affect significantly the alkalinity of the Moors River. However, it does provide direct access to the Moors River for any pollutants from the industrial estate. Further downstream, the Moors River, after passing Hurn, joins the River Stour and flows into the sea at Christchurch Harbour.

The initial phase of the plan for the 36ha country park involved the construction of a nine-hole golf course, the diversion of the Moors River just north of King's Farm, and the creation of a large lake astride its old bed, with an arm extending into the new golf course. Before the work started, at the request of the Slepe Farm office of the Nature Conservancy Council, I carried out a survey in 1985 of the Odonata of the Moors River and adjoining land between Potterne Bridge (SU 094075), upstream of King's Farm, and St Leonard's Bridge (SU 098020), below it.

The diversion of the river and excavation of the new lake (Plate 3) were quickly finished, and the latter filled by the end of 1985. The golf course was not finally completed until spring 1988.

The new lake is in two parts (Plate 2), the larger portion – the Lake – running approximately north and south, and lying astride the old river bed. It is about 450m long and on average 80m wide, and is fed by the Moors River via a sluice at the north end. In September 1988, pH readings of 8.2 were obtained, compared with 8.0 in the river itself. The smaller part, the Golf Course Pond, lies amidst the golf course to the east, separated by an embankment which carries a road and a narrow-gauge railway. The two parts of the lake are nearly on the same level and connected by a 30m long pipe. The Golf Course Pond, which is slightly the higher, is fed at its eastern end by two small ditches which originate in the nearby



Plate 2: The golf course and Lake, looking east, 1988. King's Farm is near the left edge, the Moors River this side of the Lake with the Golf Course Pond beyond the road, right of centre, and Ringwood Forest in the distance.

heathlands. These feeder ditches, at the same date, had a pH of 4.8, but 20m into the pond this had risen to 5.0. Subsequent readings showed that the acidity of the pond decreased westwards towards the connecting pipe, where the water was usually about neutral.

I was interested to discover the effects on the local Odonata population of the new lakes and started to investigate in 1988.

1985 Survey

As part of the survey of the Moors River between Potterne and St Leonard's Bridges, the area now occupied by the Country Park was

visited four times between 27 June and 12 September 1985. The only habitat suitable for Odonata was the river itself and a few field ditches, so the survey was easily and quickly carried out.

Six species were found in the King's Farm stretch of the Moors River. The first four species in Table 1 were centred along the river itself. The only *O. coerulea* (Keeled Skimmer) were a few teneral adults by a ditch to the north of King's Farm, outside the 1988/89 study area. *S. striolatum* (Common Darter) was not seen until after the Moors River had been diverted in late summer 1985, when it quickly colonised the bare banks of the new channel.



Plate 3. Excavation of Lake by King's Farm 1985.



Plate 4. The Lake 1988, with King's Farm on the left – compare with Plate 2.

TABLE 1. Species recorded during 1985 in Moors Valley Country Park.

<i>Calopteryx splendens</i> Banded Demoiselle	Abundant, breeding
<i>Pyrrosoma nymphula</i> Large red Damselfly	Common, breeding
<i>Coenagrion puella</i> Azure Damselfly	Common, breeding not proved
<i>Cordulegaster boltonii</i> Golden-ringed Dragonfly	Few
<i>Orthetrum coerulescens</i> Keeled Skimmer	Few
<i>Sympetrum striolatum</i> Common Darter	Common

1988/89 Survey

By summer 1988, the new lake and its surroundings had settled down, the scars of their construction had largely disappeared, and Odonata were numerous. The addition of the acidic Golf Course Pond to the otherwise alkaline waters of the area could have been expected to provide favourable conditions for a number of previously unrecorded species. In fact, it soon became apparent that the Golf Course Pond was not only richer than the Lake in the number of species, but the overall population density was greater. The reasons for this, in addition to the varying degrees of acidity of the water, were probably its position, depth, shape and vegetation. It is surrounded by, and well below the level of, the embankment and

the golf course, as well as being narrow, shallow and with a well-indented shoreline. This means that, regardless of the wind direction, much of the pond is sheltered. The feeder ditches are steep-sided and deep, so the shallow water in their bottoms is also usually out of the wind. The ground immediately along the pond's edges slopes gradually into the water, with a wide fringe of emergent and marginal vegetation; chiefly grasses and sedges, but also *Sphagnum* spp. particularly towards the eastern end. Perches for Odonata over the water, as well as feeding, resting and emergence areas, are thus plentiful. By contrast the Lake (Plate 4), except at the northern end where it is becoming silted up, is deeper and its sides shelve down fairly steeply from the edges, resulting in little emergent vegetation. The marginal vegetation tends to be tall *Typha* sp. and Branched Bur-reed *Sparganium erectum*, though the banks, as on the other pond, are uncut with plenty of tall grasses. However the sheer size of the Lake is a major disadvantage when recording Odonata, particularly during windy weather, as one or other, or both, of the long sides were often too exposed for many species.

A total of twelve visits were made during 1988 and 1989, but due to the vagaries of the weather these were insufficient for a complete survey. However the results – Table 2 – do give a clear indication of changes in the Odonata population resulting from the new Lake and Golf Course Pond.

Table 2 shows, for each species, the maximum number seen on any one visit, whether it was recorded on the Lake or Golf Course Pond, or both, and whether breeding (ie copulation or ovipositing). It is apparent that the construction of the new ponds, the alkaline

TABLE 2. Species recorded during 1988 and 1989 in Moors Valley Country Park.

Species	Number	Breeding	Lake	Pond	Remarks
* <i>Calopteryx splendens</i> Banded Demoiselle	E	x	x	x	1. *Recorded in study area in 1985.
<i>Calopteryx virgo</i> Beautiful Demoiselle	B		Moors River		
<i>Lestes sponsa</i> Emerald Damselfly	E	x	x	x	2. Numbers code A = 1. B = 2-5 C = 6-20 D = 21-100 E = 101-500
* <i>Pyrrosoma nymphula</i> Large Red Damselfly	C	x	x	x	Numbers are maximum on any one visit.
<i>Ischnura elegans</i> Blue-tailed Damselfly	C	x	x	x	
<i>Ischnura pumilio</i> Scarce Blue-tailed Damselfly	D	x	x	x	
<i>Enallagma cyathigerum</i> Common Blue Damselfly	E	x	x	x	3. <i>C. virgo</i> and <i>A. grandis</i> were on Moors River beside the Lake.
* <i>Coenagrion puella</i> Azure Damselfly	D	x	x	x	
<i>Erythromma najas</i> Red-eyed Damselfly	D	x	x	x	
<i>Aeshna juncea</i> Common Hawker	B	x		x	
<i>Aeshna cyanea</i> Southern Hawker	A	x		x	
<i>Aeshna mixta</i> Migrant Hawker	A		x	x	
<i>Aeshna grandis</i> Brown Hawker	B		Moors River		
<i>Anax imperator</i> Emperor Dragonfly	C	x	x	x	
* <i>Cordulegaster boltonii</i> Golden-ringed Dragonfly	B	x		x	
<i>Libellula depressa</i> Broad-bodied Chaser	C		x	x	
<i>Libellula quadrimaculata</i> Four-spotted Chaser	D	x	x	x	
<i>Orthetrum coerulescens</i> Keeled Skimmer	C	x		x	
<i>Orthetrum cancellatum</i> Black-tailed Skimmer	B		x	x	
* <i>Sympetrum striolatum</i> Common Darter	D	x		x	
<i>Sympetrum sanguineum</i> Ruddy Darter	B		x		
<i>Sympetrum danae</i> Black Darter	C	x		x	
<i>Total number of species</i>	22	16	14	19	

Lake and the acidic Golf Course Pond, has had a dramatic effect on the Odonata population. The number of species has increased from 5 to 22. Of the additions, 16 are species whose preferred breeding habitat is still, or slow-moving waters. The 17th, *C. virgo*, obviously strayed from a little further up the Moors River, where it is common.

The additional species included six which like slightly acid conditions, such as are provided by the Golf Course Pond, namely *L. spona*, *I. pumilio*, *A. juncea*, *O. coerulescens*, *L. quadrimaculata* and *S. danae*. Because of the close proximity of the alkaline Lake, it is not surprising that some of these were found there also – and similarly that alkaline-preferring species were found on the Golf Course Pond.

The female forms of *I. elegans* – *typica*, *violacea*, *infuscans* and *rufescens* – were all found, but *I. elegans* on the whole was less common than the nationally rare *I. pumilio*. This occurred mainly on the Golf Course Pond, but also, less abundantly, at the north end of the Lake. No *aurantiaca* females were seen, though these are quite frequent on the ponds and ditches of the nearby Ministry of Defence petroleum depot (SU 0904), where this population probably originated. Curiously *Ceragrion tenellum* (Small Red Damselfly), which is also common in the depot, has not yet been recorded at the Country Park. The presence of *E. najas* was unexpected, as it is a scarce species in Dorset, but, as there are small beds of *Potamogeton* sp., the Lake was recognised as a possible breeding site. After a single male in 1988, 23 were recorded on 24 June 1989, including copulating pairs, and there was a single male on the Golf Course Pond – with further records later.

The absence of breeding records for five of the Anisoptera is due, I believe, solely to lack of observation time, as all species were in suitable breeding habitat. The abundance of *C. splendens*, *L. spona* and *E. cyathigerum* in particular, but also other species, can be attributed at least in part to the sympathetic treatment of the waterside vegetation. It was left uncut by the wardens wherever possible, thereby providing valuable shelter, feeding and emergence areas for Odonata and other invertebrates.

Discussion

In my report on the 1985 Moors River Survey to the Sleppe Farm office of the Nature Conservancy Council, I concluded:

‘The construction of the King’s Farm Lake could be extremely beneficial to the Odonata if – but only if – the water within it is kept free from pollution. It would appear from this survey that, to achieve the level of purity required by the susceptible species, action will be necessary to clean up both the Moors River and the

Ebbleke Stream. If this cannot be done, a large pond which is fed by springs, drainage ditches or other sources independent of the two streams would be an attractive alternative.’ Superficially, the Moors River appeared in 1988 and 1989 much as it had in 1985, but the growth of the Ebblake estate gave cause for concern. I was informed that there had been pollutant incidents attributable to this estate and, on one of my visits, the upper reaches of the Ebblake Stream, just after it passed the estate, appeared to be badly polluted. However, so far little of this pollution has apparently entered the Lake, as the sluice at the north end is usually kept closed except in time of flood.

The Golf Course Pond would be less likely to be affected, as any polluted water in the Lake should be much diluted by the time it reached the connecting pipe. The Golf Course Pond, indeed, for all intents and purposes meets the characteristics of the ‘attractive alternative’ mentioned in the 1985 report. The richness of its Odonata population seems to confirm this. However the Moors River is also important in its own right, particularly as *Libellula fulva* (Scarce Chaser) breeds on its lower reaches; which were, until the 1950s, the stronghold in Britain of the now nationally extinct *Oxygastra curtisii* (Orange-spotted Emerald) – further reasons for pressing for action to reduce the present level of pollution, and the prevention of further incidents.

Conclusion

The completion of the first phase of the Moors Valley Country Park plan has, through the construction of the ponds at King’s Farm, been extremely beneficial to the Odonata fauna. The Golf Course Pond, with its acidic feeder ditches, is especially valuable, and held 19 out of the 22 species recorded – the latter being an increase of 17 species over those found in the area in 1985.

The area of the Lake and Golf Course Pond, because of the number of species, now meets the requirements of a Site of Special Scientific Interest for Odonata. Because of the presence of breeding *I. pumilio* and *O. coerulescens*, it also qualifies as a potential Key Conservation Site.

Pollution from, in particular, the expanding Ebblake Industrial Estate poses a threat to both the Lake in the Country Park, and to the Moors River downstream.

Acknowledgements

I am grateful to Mr Ian Cooper of the East Dorset District Council and to Mr David Crompton, the chief warden at the Country Park, and his assistants, for their helpfulness.

AMPHIBIANS

ROBERT V. SKINNER

The amphibian reports received by the Dorset Environmental Records Centre during 1989 are included in tabular form at the end of this section.

Smooth Newt *Triturus vulgaris* – L. See DERC report at the end of this section.

Palmate Newt *Triturus helveticus* – Razoumowski. One only seen during the year in a garden pond at Corfe Mullen on 26th March. (A. H. Dunn) Ponds in a Parkstone garden support large populations of this species but few Smooth newts. (R. J. Skinner)

Crested Newt *Triturus cristatus* – Laurenti. See DERC report at the end of this section.

Common Frog *Rana temporaria* – L. Four adults were active in a Corfe Mullen garden pond on 31st January. Two were seen in amplexus on 4th February. By the 7th February 10 adults were observed and on 8th February four were in amplexus. The first batch of spawn was seen in this pond on 11th February. On 12th February there were 12 frogs present and two batches of spawn. On 19th February 31 adult frogs were counted in this pond. A neighbour's large garden pond had much spawn and several hundred frogs on 26th February. Many adult frogs had left the ponds by 3rd March. Frog spawn was seen in a garden pond at Winterborne Stickland on 3rd March. At the end of March there were still 18 frogs in a Corfe Mullen garden pond, one pair still in amplexus. By 28th April there were no tadpoles left in this pond. On 6th July 8 frogs and a number of toads were seen in the same garden, on a driveway on a wet night. Many baby frogs were in a Winterborne Stickland garden on 24th July. It was noted on 27th October that there were many frogs distributed throughout the Corfe Mullen garden. (A. H. Dunn) This species was first heard calling in a Swanage garden on 24th January. (J. R. Cox)

Common Toad *Bufo bufo* – L. Spawn present in a shallow of the River Stour near Eye Bridge on 26th March. A few tadpoles were found when cleaning out the pond at Worth Matravers on 5th May. Six individuals seen throughout the year in a Corfe Mullen garden, but not in the pond. (A. H. Dunn)

The species was under-recorded for Studland Heath NNR. The earliest date was for a road casualty on 24th January. (S. J. Morrison) At least 12 individuals were recorded during the year. The last sighting for the Reserve was on 12th November. (Mr and Mrs B. Skelton) An early record of calling was for a Swanage garden on 4th January. (J. R. Cox)

The following table lists the amphibian reports for 1989 received by the Dorset Environmental Records Centre, Dorchester.

REPTILES

ROBERT V. SKINNER

The reptile reports received by the Dorset Environmental Records Centre during 1989 are included in tabular form at the end of this section.

Slow-worm *Anguis fragilis* – L. One found on Corfe Mullen heathland on 16th June and another in a Corfe Mullen garden on 4th October. A dead specimen was found on a Corfe Mullen footpath on 11th November which may have been killed by a badger as dung pits were nearby. (A. H. Dunn) The earliest date for Studland Heath NNR was 5th March. (Miss C. E. Ollivant) and the last date was 21st September. Approximately 21 adults and 10 juveniles were recorded on the Reserve during the year, which is similar to the records for 1988. (J. R. Cox)

Viviparous or Common Lizard. *Lacerta vivipara* – Jacquin. One individual seen near the Corfe Mullen brickworks on 21st May and another on Corfe Mullen Common on 16th June. (A. H. Dunn) First date for Studland Heath NNR was 9th February when four adults and one juvenile were seen. The last date was for a juvenile seen on 28th September. During the year 31 adults were recorded (less than in 1988) and 17 juveniles (same as in 1988). (J. R. Cox)

Sand Lizard *Lacerta agilis* – L. Earliest date for Studland Heath NNR was for a male on 27th March. Another male was seen on the same date on Godlingston Heath. (S. J. Morrison) The last date was 26th August. There was very poor coverage during the year and only 13 individuals were seen. (J. R. Cox)

Grass Snake *Natrix natrix helvetica* – Lacepède. On 28th April this

SPECIES	SITE	GRID REF.	RECORDER	DATE	NOTES	
Smooth Newt	Wyke Regis	666771	A. Penny	1989	Garden pond	
	Maiden Newton	599976	R. J. Surry	1 Mar.	Numerous in old orchard pond	
	Warry's Plantation	696110	E. Prendergast	18 Mar.	Several in pond	
	Bonsley Common Pond	824093	E. Prendergast	22 Mar.		
	Turnworth Pond	808087	E. Prendergast	22 Mar.		
	Bagber	7615	E. Prendergast	24 Mar.	Garden pond	
	Bagber	7615	E. Prendergast	14 Apr.	Garden pond	
	Rooksmoor	736106	E. Prendergast	14 May	Several in a ditch	
	Palmate Newt	Maiden Newton	599976	R. J. Surry	1 Mar.	Orchard pond
		Warry's Plantation	696100	E. Prendergast	18 Mar.	
Bonsley Common Pond		824093	E. Prendergast	22 Mar.		
Povington Ranges		886827	E. Prendergast	6 May	Three	
Povington Ranges		893836	E. Prendergast	6 May	One	
Crested Newt	Bagber	7615	E. Prendergast	20 Apr.	One in garden pond	
Common Frog	Beaminster	481012	J. Messer	1989	Several sightings	
	Wyke Regis	666771	A. Penny	1989	12 in garden pond	
	Dorchester	6989	E. M. Keats	5 Jan.-6 Feb.	Garden pond	
	Bradford Peverell	6593	Mrs Sturgeon	8 Feb.	Pond 'overflowing' with spawn	
	Talbot Heath	068928	E. Prendergast	20 Jul.	Two	
	Weymouth	694819	P. I. Fraser	24 Jul.	One adult	
	Weymouth	694819	P. I. Fraser	27 Jul.	One juvenile	
Common Toad	Beaminster	481012	J. Messer	1989	Garden	
	Wyke Regis	666771	A. Penny	1989	83 in garden pond	
	Waytown	468977	M. Savage	1989	Garden	
	Herston	018788	W. G. Teagle	8 Feb.	Road casualty	
	Westrow Pond	696104	E. Prendergast	18 Mar.	Adults and spawn	
	East Creech	935828	M. H. Lock	8 Aug.	Beside footpath	
	Leeson House	004787	W. G. Teagle	23 Aug.	In grounds	
	Maiden Newton	596977	C. J. Slade	30 Oct.	Garden	
	Waytown	468977	M. Savage	Nov.	Juvenile on kitchen floor	
	Came Down	6886	K. E. Ormerod	8 Dec.	One (described as Natterjack) swimming in a BT manhole	

species was seen eating goldfish from a pond in a Corfe Mullen garden. (A. H. Dunn) Two individuals were seen on Studland Heath NNR on 9th February which was the earliest sighting for the Reserve. The last date was 18th November. (Miss J. Cox and Mrs A. M. Cox) About 25 individuals were recorded, practically the same as for the previous year. (J. R. Cox)

Adder. *Vipera berus* - L. An adult male was seen basking on heath path at Corfe Mullen Ridge on 9th June. A melanistic gravid female was found on a path in Wareham Forest on 12th June. (A. H. Dunn) The earliest record for Studland Heath NNR was for four males and one female on 9th February and the last record was for a male on 12th November. The total recorded for the Reserve was in the region of 50, which is more than in the previous year. (J. R. Cox)

Smooth Snake. *Coronella austriaca* - Laurenti. Two juveniles were observed on heathland near Decoy Heath, Wareham Forest. (A. H. Dunn) Four individuals were recorded on Studland Heath NNR during May, August and September. Regrettably one of these was a road casualty. (J. R. Cox)

The following table lists the reptile reports for 1989 received by the Dorset Environmental Records Centre, Dorchester.

ORNITHOLOGICAL NOTES, 1989

PAUL HARRIS

In many respects 1989 was less exciting than the previous two years but still held a few surprises.

The early winter period was relatively quiet with wintering Iceland Gull and Black Guillemot still present in Weymouth and the two Waxwing still at Bovington from December 1988. The only birds of note were a male Surf Scoter at Burton Bradstock and a Penduline Tit in Poole Harbour.

The first Wheatear and Sand Martin appeared on the 6th March and a Waxwing was seen on Portland, presumably a returning bird from last winter's nationwide influx. The real gems were a short

staying Great Spotted Cuckoo at St. Aldhelms Head (a county first) and a probable Blyths Pipit on Portland which stayed for several weeks, both birds appearing in March.

Spring saw the regular crop of rare and scarce migrants including four Subalpine warblers, two Short-toed Larks, Red-rumped Swallow, Woodchat Shrike and an Alpine Swift over Dorchester Museum. Even rarer was an adult Rose-coloured Starling which remained on Portland into the winter (on a bird table!), Great Reed Warbler and astonishingly a male Rock Thrush for the second year running on Portland. A Lesser Grey Shrike was seen on the county border near Yeovil.

Midsummer was notable for two singing male Scarlet Rosefinches at Durlston and Portland, inland a Woodchat Shrike at Almer, two Black Kites and a widespread influx of Quail, with up to seven birds at some sites. Another county first was a Blyths Reed Warbler trapped at Portland.

Late summer/early autumn was very quiet apart from Red-rumped Swallow, Little Egret and Woodchat Shrike. A Blue-winged Teal was seen at Christchurch and a Great Reed Warbler was trapped there. Also of note was the first breeding by Ruddy Duck in the county at Radipole, a Corncrake at Portland and a Semipalmated Sandpiper on the Fleet, a second county record.

Late autumn was also rather uneventful with only a couple of Pallas's warblers, two Radde's warblers, Little Bunting and a probable Rufous Turtle Dove on Portland.

Portland also came up trumps with a Steppe Great Grey Shrike in November, only the fourth British record.

December is usually rather quiet but this year produced a male Dark-eyed Junco from America, found in a local bird-watcher's back garden and probably the biggest crowd-puller of the year. Also notable was a huge influx of Leach's Petrels along the Dorset coast after several days of gales, well in excess of 150 birds being involved.

The year came full circle with the Black Guillemot and Iceland Gull once again returning to Weymouth for the winter.

SPECIES	SITE	GRID REF.	RECORDER	DATE	NOTES
Slow-worm	Beaminster	481012	J. Messer	1989	Common in garden
	Wyke Regis	666771	A. Penny	1989	Garden
	Dorchester	688898	D. B. Jeffery	1989	Garden
	Stoborough Heath	934816	M. H. Lock	8 Apr.	1 under plywood
	Ridge	936865	J. M. Bowcott	30 Apr.	Garden
	Weymouth	694819	P. I. Fraser	May	Garden
	Arne Road	957866	J. M. Bowcott	22 May	2 - mating (?)
	Swanage	022785	W. G. Teagle	31 May	One
	Townsend NR	02517809	W. G. Teagle	31 May	Two
	Balfours Wood	8916	C. R. Bristow	22 Jun.	
	Swanage	022782	W. G. Teagle	8 Jul.	
	Weatherby Castle	808962	K. Clarke	12 Jul.	
	Herston	017785	W. G. Teagle	9 Aug.	
	Fordington Green	698905	C. Chaplin	20 Aug.	1 dead in gutter
	Frome Vauchurch	596975	A. Mahon	19 Sep.	
	Common Lizard	Canford	044954	A. Mahon	8 Feb.
Parley Common		096997	A. Mahon	13 Apr.	
Broadcroft Quarry		697721	A. Mahon	21 Sep.	
Grass Snake	Leeson House	004786	W. G. Teagle	25 May	1 in grounds
	Leeson House	004786	W. G. Teagle	21 Jun.	1 in pond
	Povington Ranges	876823	E. Prendergast	13 Aug.	
	East Parley Common	104992	A. Mahon	17 Aug.	
	Leeson house	004787	J. F. Teagle	Autumn	'Shells' of eggs in compost heap
Adder	Townsend NR	02287824	W. G. Teagle	11 Mar.	One
	Deadmoor Common	751114	E. Prendergast	2 May	
	Povington	876819	E. Prendergast	6 May	1 dead
	Snails Bridge	895937	D. Pearman	22 Jun.	Melanistic
	Moors Valley	1005	E. Prendergast	25 Jul.	One
Smooth Snake	Parkstone	038918	K. Hebditch	Aug.	Garden

KESTREL SURVEY 1988 AND 1989

E. F. C. COETZEE

In recent years records have suggested that there has been a reduction in the breeding population of the Kestrel, *Falco tinnunculus*, in Dorset.

This survey, originally intended to be carried out over a period of 5 years starting in 1985, was an attempt to establish whether the Kestrel breeding population is stable or not: however, because the 1986 and 1987 records were stolen from the recorder's car, the survey had to be reduced to eight months in 1988 and to 1989.

The 1985 sightings, although not numerous in number, did establish some sites where Kestrels, either as single sightings, or as possible pairs, could regularly be observed. The 1985 observations also showed that from the middle of March to about the middle of May Kestrel observations were noticeably reduced. Because of the loss of the previous two years' records, 1988 was spent in re-establishing, by using the 1985 records where Kestrels may be regularly observed. Figure 1 indicates where Kestrels either as pairs or singles were observed from May to December.

During 1989, using the 1988 records, an attempt was made to try to establish how many possible breeding territories there were in the county. Figure 2 indicates within 10 kilometre squares throughout the county where male and female Kestrels were observed either displaying together or hunting in close proximity to each other, thus indicating the possible presence of a breeding pair.

Although large areas of the county were not covered, the records suggest that during 1989 there were at least 56 possible breeding pairs within Dorset.

How successful breeding was, was not established as no actual breeding records were received.

The conclusion is that because these birds are regularly seen they may be under-recorded; also during the breeding period from late March to early June when the female Kestrels may be sitting on eggs their numbers appear to drop, while in the latter part of the year the numbers increase because of the presence of juveniles as well as migrating birds.

I would like to thank the following for sending me their records: A. Coetzee, Mrs J. E. Coetzee, E. Flatters, G. K. Graham, D. Hawkins, J. Hinton, Q. Palmer and Mrs D. Palmer, Mr and Mrs H. J. Platt, J. Powne, G. Smallwood, F. Wigzell.

DORSET BIRD NAMES: AFFINITIES AND ORIGINS

W. B. LOCKWOOD

Malcolm H. Jones, co-author of Jones and Dillon, *Dialect in Wiltshire* (1987), has kindly drawn our attention to two contributions in these *Proceedings* for 1982: W. B. Yapp, 'Names of Birds in the Sherborne Missal' (pp. 5-15) and E. D. V. Prendergast, 'Dorset Names for Birds' (pp. 33-37).

This material is not only of interest to the ornithologist, but equally so to the linguist. In the *Oxford Book of British Bird Names* (1984) – which may here serve as an overall reference – we consider the affinities and origins of some 1500 names. These include the majority of those now so thoroughly documented for Dorset. Most of them have also been recorded from other parts of the country, especially from the neighbouring counties, but a fair number are confined to Dorset. Some of these uniquely Dorset names could be treated in the above-mentioned work, but others, little known hitherto, escaped attention. It is essentially these we now propose to examine.

It will be convenient to begin with the second contribution. One notices, at the outset, a remarkable number of Wheatear names apparently peculiar to Dorset. We may appropriately treat these together. At the same time we can deal with the Stonechat and Whinchat names, since popular terms for these species (which are not normally distinguished by the layman) are often related to, and indeed sometimes identical with, names bestowed on the Wheatear, see *Oxford Book* under Stonechat.

We therefore first discuss the Dorset names Fuzz-acker and Furze Hawk given as Stonechat and Whinchat respectively. Our suspicions that the distinction in meaning is artificial are confirmed when the linguistic analysis shows that the words are merely variants of the same basic term, see further below. Doubtless, then, the words in question are equally applicable to either species. The element Fuzz- is naturally a development of Furze-, i.e. with assimilation of rz to zz; Furze-, motivated by the habitat, is a common

constituent of such names. The Dorset names have approximate parallels elsewhere, as Fuzz Jack (Glos.) and Furze Jack (Sussex), where Jack has arisen from Chack, imitative of the clicking sounds which form part of the vocal repertoire of these birds as in the north-country Wheatear name Stone Chack, in some places changed to Stone Chacker. At this point we notice a Hants name for the Stonechat and Whinchat, namely Furze Hacker. Now neither of these birds 'hacks' furze, so that Hacker cannot be an original form, but will be a folk-etymological distortion of Chacker. The name thus presupposes *Furze Chacker (an asterisk in these studies denotes a postulated, but not actually recorded form), itself a development of *Furze Chack, the name lying behind Fuzz/Furze Jack (above). Returning to the Dorset names Fuzz-acker and Furze Hawk, the former is now seen to be a representation of Furze Hacker, initial h being regularly dropped in dialect or unpretentious speech. The latter name has arisen from the former, as follows. Seeing that Furze Hacker makes no proper sense, folk-etymology has again been at work changing Hacker into Hawk, in reality of course as implausible as the antecedent it sought to correct. But that is the way with folk-etymology.

We are now in a position to interpret Wallacker, the first of the Dorset names for the Wheatear. Given the common interchange between Wheatear names and names for the Stonechat and Whinchat, we compare Fuzz-acker, i.e. Furze Hacker (above), and recognise the present name as properly *Wall Hacker, the epithet Wall alluding to a common nesting site, a hole in a dry-stone wall.

A Wheatear name may contain another onomatopoeic element, Smatch. Formerly occurring as a name in its own right, it today survives unchanged only in the compound Horse Smatch (Cornwall), originally *Hoar Smatch, i.e. 'White Smatch' in reference to the white rump. From this developed the variant Horse Match, recorded from Glos., which in Wilts. became Horse Masher. Similar patterning gave a Cornish variant Horse Masher, evidently presupposing *Horse Smasher, as we now see, for these elements are recognised again in our Dorset names Yeat Masher and Yeat Smasher. And what of the element Yeat? Well, 'yeat' is good Dorset for 'wheat', so what we are witnessing here is interference from the standard name Wheatear. The form Yachtmacher (p.35) clearly belongs here, but the orthography is so odd that we suspect it to be corrupt, in fact possibly no more than an indistinctly written Yeat Masher.

Finally the linguistically most surprising name, Snalter or Snorter; the variant Snatter is most likely a misprint, and in any case irrelevant for the etymology. The primary form is Snalter. From this one can easily accept a pronunciation /Snolter/ which may then be interpreted as Snorter. But whereas Snorter makes no sense as an original form, Snalter is an eminently apt term, as the etymology reveals. The name can be envisaged as an agent noun from a verb *snalt, which in medieval (Middle) English would be (in the infinitive) *snalten. Though no such verb has been recorded, it can be presumed to have existed since we find an exact equivalent in medieval (Middle High) German *snalzen* (becoming in the modern language *schnalzen*), German *z* and English *t* regularly corresponding in this position cf. German *salzen* with English (to) salt. The German verb, of imitative origin, means click. The postulated English cognate will, not unnaturally, have had the same meaning, so that on this analysis Snalter is literally clicker. Needless to add, this makes excellent sense as a Wheatear name, recalling the above-mentioned onomatopoeic names deriving from the clicking sounds made by this bird.

We turn next to Dorset names for other species, treating them in alphabetical order.

Chatterack 'Partridge'. A name of this shape is surely imitative. As such one would expect it to be associated with a noisier species than the (presumably Common) Partridge. Indeed, we have not previously encountered a Partridge name motivated by the voice. The present identification comes from a single source (p.34); one would like independent confirmation.

Cheese-eater 'Blue Tit'. This name comes, as Col. Prendergast notes, 'from its cry'. It may be added, however, that the name is secondary in that it presupposes an original form *Cheese-eat, purely imitative of the call, in principle like Pickcheese, a name for this bird in use in East Anglia. An instructive analogy is seen in Cherry Chopper, a Worcs. name for the Spotted Flycatcher, nonsensical as it stands, but explicable as a derivative of *Cherry Chop, a plausible representation of the chirping notes of this Flycatcher.

Cheffon 'Chaffinch'. One may compare Somerset Cheffin, originally *Chaffin, for Chaffinch after the analogy of such names as Martin, Robin, etc.

Coper 'Woodcock'. Probably a mistake; not found in the sources quoted.

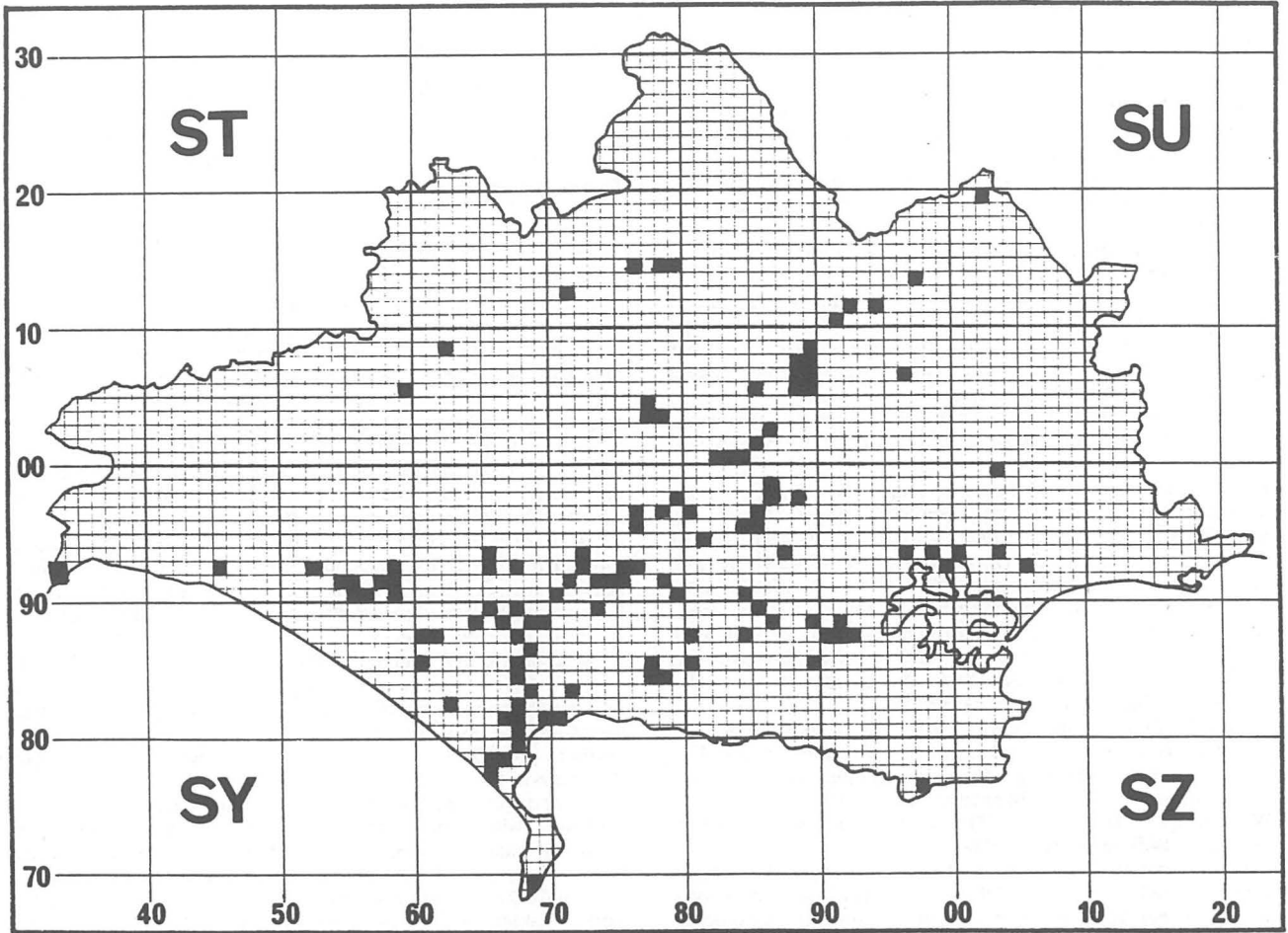


Figure 1. Kestrel observations from May to December, 1989.

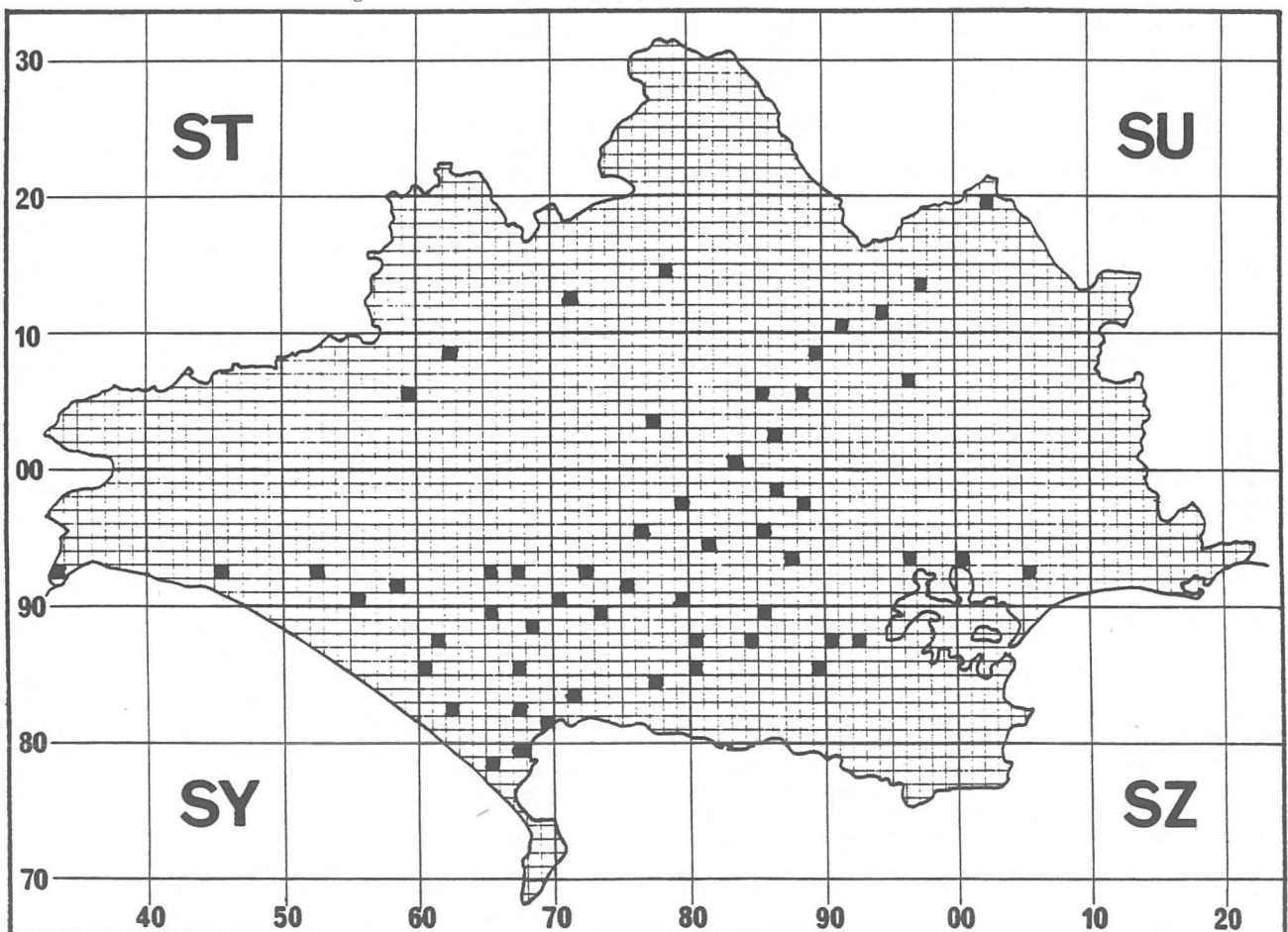


Figure 2: Possible Kestrel pairs within 10 kilometre squares.

Frag 'Dunlin'. Quite unlike any known term for this bird, or for any other. From the same source as Chatterack, with the same reservations.

Gingler Curre 'Goldeney'. The name Curre is widely applied indifferently to other Ducks as well, as the Pochard, the Scaup and the Tufted Duck; it is imitative of the harsh, growling call of these species. The epithet Gingler (Jingler) enhances the onomatopoeia, cf. Rattler and Whistler, local names for this bird recorded from various places.

Hump 'Puffin'. Names for this bird generally allude to the grotesque beak. This will be so in the present case, too.

Joey Widdler 'Ringed Plover'. This bird has a distinctive, musical note which doubtless inspired the present, playful name. Perhaps the word fiddler played a part. A rough parallel occurs in the East Anglian name Dulwilly (Dull Willy), while a purely onomatopoeic synonym is seen in Tullet, a term from Ches. and Lancs.

Richel Bird 'Little Tern'. Apparently from G. Montagu, *Ornithological Dictionary* (1802); a mysterious term, possibly corrupt.

Rob 'Dunlin'. Can hardly be other than a nickname, i.e. from Robert, but why this particular name should be chosen eludes us.

Rug, Great Rug 'Great Northern Diver'. The name is said to have been 'pronounced in the Dorset dialect' (p. 34) which we take to mean that the vowel was long, as in the local pronunciation of bull. Given that such monosyllabic names for this species are recognisably onomatopoeic – Naak, a Northumberland term, is a good example – so Rug, too, will express one of the strident, yelping noises heard from this vociferous Diver. The epithet Great naturally indicates the influence of the standard name.

Vanner 'Kestrel' = Fanner, initial v for f being a common feature of the dialects of the south-west, see also 'Vveldvare' below. The allusion is to the beating wings of the hovering bird; one may compare the Sussex names Wind Fanner and Fanner Hawk.

Withy-hanger 'Trecreeper'. The literal sense will be twig-hangar, and compare 'Waryhäger' below.

We now refer to the Sherborne Missal. The book dates from around 1400 and we understand that the names of the birds associated with the illustrations were written at the same time. This being so, several of these represent the earliest record of a given name, among them (in modern orthography): Bergander (previously not noticed before 1544), Greenfinch (c.1532), Linnet (c.1530), Wagstart 'Wagtail' (c.1440), Woodwall 'Green Woodpecker' (c.1489). The name quoted as 'kyngesfyster' (p.11) will be a poorly written 'kyngesfyscer', antedating the previous first recording of c.1440, though the term occurs as a personal nickname 'Henry le kingesfischer' as early as 1318.

Other names of interest here require discussion. It will be best to quote the actual spelling of the ms., but using an initial capital throughout. In the order of their appearance below the names are: 'Bornett', 'Gay', 'Morcoc', 'Rodduc robertus' and 'Roddoke', 'Tayle mose', 'Wop', 'Waryhäger', 'Cay fynch', 'Vveldvare'.

'Bornett' (p.11) occurs beside a drawing of a Barnacle Goose. Yet the word can hardly be other than a poorly spelt Brant – there are other erratic spellings in this material! Not hitherto noticed before 1544, Brant is the earlier form of Brent, and an abbreviation of Brant Goose, the ultimate source being Old Norse *brandgás* taking us back to the Viking age. The names of the Barnacle and Brent are sometimes confused; the same may be presumed here.

'Gay' (p.9) is a conservative variety of Jay, the record here apparently antedating the previous earliest attestation by half a century.

'Morcoc' (p.12). Commenting on the illustration Dr Yapp writes 'An unidentified bird', but suggests that it could be a water rail, though 'the name is inappropriate'. We note, however, that the linguistic difficulty disappears if 'Mor-' is understood in its older sense of marsh, as still found in Moorhen. To this extent name and picture match.

On p.10 we read this commentary to the picture of a Robin: 'There are two names here, *Rodduc robertus* written across the bird, and *A roddoke* at an angle of about 40 degrees to the first name'. By the spelling standards of the age *Rodduc* and *roddoke* are pretty well the same thing, that the redundancy is curious and one wonders if they were actually written at the same time. We note, however, that the latter name has been read as *redokke* by Sir E. Maunde Thompson, *Proceedings of the Society of Antiquaries of London*, XVI (1895-97), p.230 – this reference I owe to the kindness of John B. Smith. If this is so, we have here a forerunner of Reddock, the modern Dorset variant of the more usual Ruddock, our oldest Robin name going back to Old English *rudduc*. The latinised *robertus* is approximately contemporary with 'Robert

redbreast' from a Cambridge ms. (*OED*), making these the earliest evidence for the use of this personal name to denote a bird. There is reason to believe that the practice actually arose about this time: see our 'Marriage of the Robin and the Wren' *Folklore* 100 (1989), pp.237-39.

'Tayl mose' (p.11) accompanies an illustration described as 'a bird of the shape of a long-tailed tit'. That such a tit was indeed meant is confirmed by the name, the literal sense of which is 'tail tit'. Had the word survived, its modern form would have been *Tailmouse, cf. Sherborne 'Col mose' Coalmouse. The present word is of particular interest, since the philologist can establish its antecedents and through them identify the oldest naming tradition. The Sherborne form – we normalise *tailmōse* – will have been preceded by **stertmōse*, since *stert* is the primary word for a bird's tail and usual in the early period of Middle English (1150 to 1300). That being so, we may confidently go further back to postulate Old English (Anglo-Saxon) **steortmāse*. Confirmation comes from parallels seen in Dutch *staartmees* and Middle High German *sterzmeis* (now replaced by *Schwanzmeise*, medieval *stert* in this sense having died out). Thanks to Sherborne, we have thus also recovered the common West Germanic name for the species in question.

'Wop' (pp.9, 11). This Bullfinch name, to be normalised wōp, is far and away the first attestation of the modern term Whoop, according to the *English Dialect Dictionary* attested for Dorset (though not confirmed in Col. Prendergast's lists) and for Devon. It is a variant of Hoop, widespread in south-western counties.

Dr Yapp (pp.14f.) comes to the tentative conclusion that the Sherborne birds were named by a northerner, with the rider that the artist himself was perhaps from the north country. He finds indications for his view in two of the names, envisaged as being of northern provenance. Closer philological analysis, however, shows that this is not so.

The first word, the Shrike name 'Waryhäger', i.e. Waryhanger, is compared with a now obsolete synonym Waryangle/Wariangle, found in Chaucer c.1386 and since 1598 variously attested for Staffs., Shrops. and Derby. Dr Yapp plausibly argues that Chaucer could have known this word from time spent at nearby Hatfield, Yorks., making the term a purely northern one. Yet even if this supposition is correct, it hardly entitles us to regard Waryhanger as a northern form also. No one will dispute that the two terms are related, but seeing that they are so differently formed, their relationship is not very close. One will rather be disposed to conclude that Waryhanger is more likely to represent the local tradition of the Dorset region as opposed to a tradition elsewhere. We can add that a third variant is known: Warwinckle, recorded in a work on falconry from 1618 (*OED*). All three are, in fact, variants of our oldest Shrike name, which though unattested in the oldest period of the language, must nevertheless have existed from the beginning, since it has a parallel in old High German *wargengil* (and closely related forms). The German cognate further shows that Waryangle/Wariangle preserves a more archaic structure than Waryhanger (or Warwinckle), now seen to have been created by folk-etymology, -hanger (like -winckle) replacing the peculiar -(y)angle. In conclusion we note that -hanger is a most unusual element in a bird name. In fact, we have met only one other example: the modern Dorset name Withyanger (above) – sure confirmation that Waryhanger was indeed a native Dorset name.

Dr Yapp's second example, also a uniquely Sherborne form, is the Chaffinch name 'Cay fynch', i.e. Cayfinch. Dr Yapp points out that initial c instead of ch would indicate a northern origin, finding a parallel in 'Caffynche', i.e. Chaffinch, from *Promptorium Parvulorum*, a dictionary compiled about 1440. He further notes northern dialect caff for chaff. But, as it turns out, there has to be a different answer in the case of the bird name, for – in spite of the general phonetic rule – initial c also occurs in the far south, witness Caffincher from Sussex and Surrey. Here the ending -er is of course secondary after the analogy of the many bird names having this termination; the earlier form was *Caffinch. We now recall that the primary form Chaffinch passed through an early stage when the pronunciation was /Chaffintch/. At this time, the two ch-sounds in such close proximity must, in some areas, have proved intolerable, with the result that the first was dissimilated to c. The Sherborne variant clearly belongs to this type, developing from *Caffinch. Admittedly we cannot explain the vowel change in the first syllable, but there is no doubt that here is a genuine Dorset word. Forms with initial c were evidently once more widespread than they are today, as the occurrence in the *Promptorium parvulorum*, compiled by Geoffrey of Lynn (Norfolk), also indicates.

We now take a name, the very shape of which precludes any suggestion of northern influence. It is 'Vveldvare', i.e. Fieldfare, the

spelling (and pronunciation) v for f being found only in the south; it is a feature especially common in the dialects of the south-west, cf. Vanner (above). Hitherto only recorded in recent times, as Veldiver (various places in the south-west) or Velverd (Wilts.), the Sherborne word is thus by far the oldest example of a v-form in this particular name. Indeed it is among the earliest instances of the phonetic change in question to be found in English anywhere.

One may safely say that the Sherborne Missal bird names do in fact adequately reflect Dorset usage at the turn of the fourteenth century.

MAMMALS

E. M. KEATS

Mammal records have been submitted by a number of contributors. These records are most useful in building up a distribution picture for mammals in the County. All records are indexed and added to the distribution maps at the Dorset Environmental Records Centre. Records are welcome direct to me or to the Centre. The DERC is now housed in the County Planning Department at County Hall but still has close links with the County Museum. Identification details are important for rare species and any observations on behaviour are of particular interest.

Maps showing the recorded distribution of Rabbit and Grey Squirrel are printed in this report; if any recorders have records for squares not so far reported please send them in. I am grateful to Mr. Richard Surry, Keeper of records for DERC for preparing these maps which include records submitted up until the end of 1989.

The checklist numbers and Scientific names are as listed in *The Identification of British Mammals* by G. B. Corbet, British Museum (Natural History) 1969. In addition to the species mentioned elsewhere in the report the following species were reported in 1989: 1. **Hedgehog** *Erinaceus europaeus*, 2. **Mole** *Talpa europaea*, 3. **Common Shrew** *Sorex araneus*, 4. **Pygmy Shrew** *Sorex minutus*, 5. **Water shrew** *Neomys fodiens*, 9. **Lesser Horseshoe Bat** *Rhinolophus hipposideros*, 16. **Serotine** *Eptesicus serotinus*, 18. **Noctule** *Nyctalus noctula*, 24. **Fox** *Vulpes vulpes*, 31. **Badger** *Meles meles*, 32. **Otter** *Lutra lutra*, 34. **Grey Seal** *Halichoerus grypus*, 43. **Sika Deer** *Cervus nippon*, 44. **Fallow Deer** *Dama dama*, 53. **Brown Hare** *Lepus capensis*, 59. **Dormouse** *Muscardinus avellanarius*, 62. **Wood Mouse or Long-tailed Field Mouse** *Apodemus sylvaticus*, 66. **Brown Rat** *Rattus norvegicus*, 67. **Bank Vole** *Clethrionomys glareolus*, 68. **Water Vole** *Arvicola terrestris*. 8. **Greater Horseshoe Bat** *Rhinolophus ferrumequinum*. This species was recorded in its Central Dorset breeding roost, also in one in West Dorset, another in the East of the County and in winter hibernation sites in Purbeck. A tunnel into the chalk was dug by the Dorset Bat group under Dr. R. E. Stebbings' direction in Central Dorset in April to provide a suitable all the year roost where this species is found with other bat species.

Brandt's Bat *Myotis brandtii*. In the NE of the County 130 bats were counted emerging from a known roost: of 9 caught 5 were ♂ Brandt's and 4 were probably ♀ Brandt's. One wonders if they have evicted the 60 bats which were in the roost in 1988, which were Natterer's bats *Myotis nattereri*, Pipistrelles *Pipistrellus pipistrellus* and Long-eared Bats *Plecotus* species. One Whiskered/Brandt's was found in a winter hibernation roost in Purbeck as were Natterer's, Daubenton's *Myotis daubentoni*, Brown

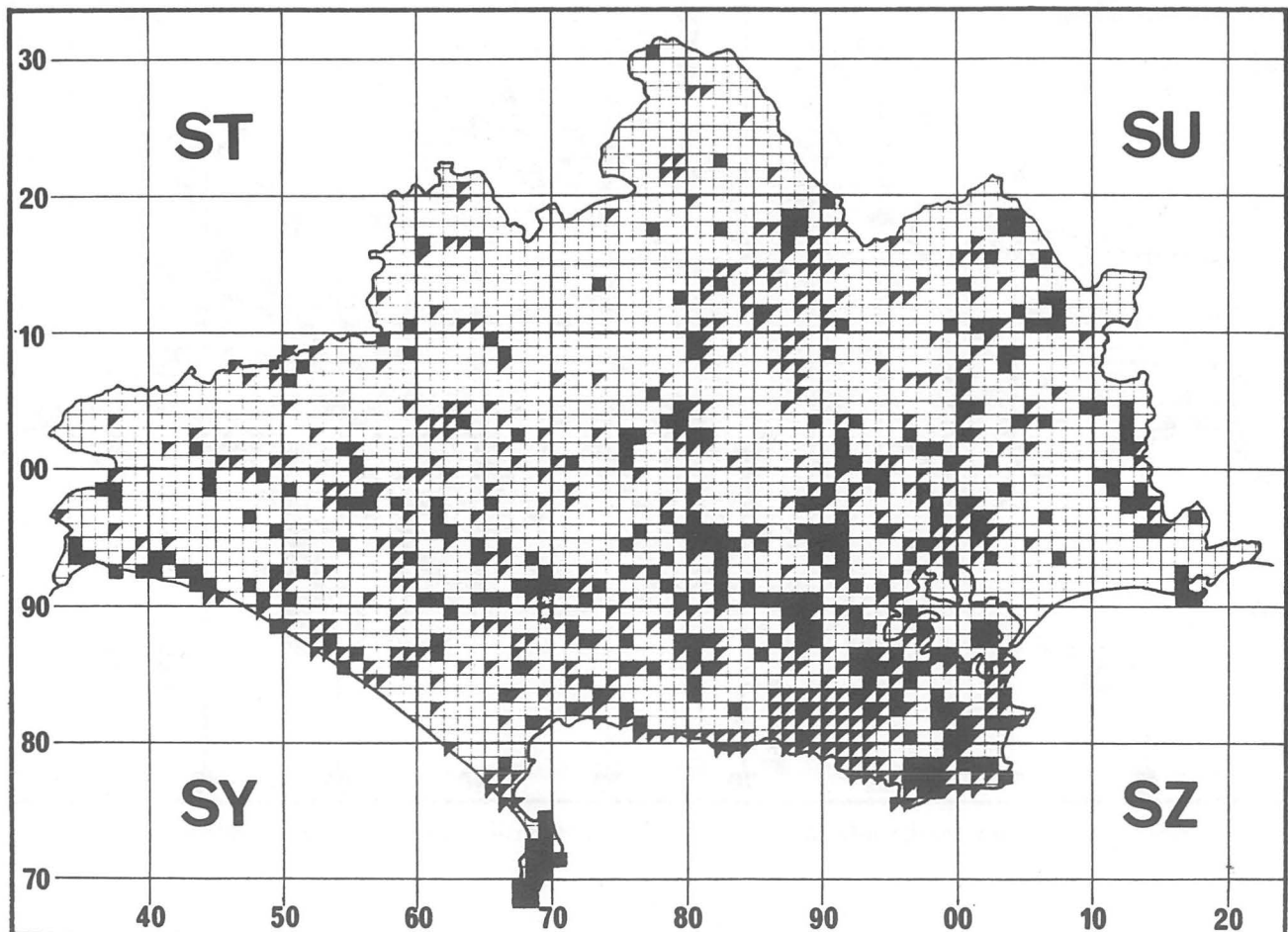


Figure 3. Rabbit *Oryctolagus cuniculus*. Half-filled squares pre-1980 records, filled squares post -1980 records.

Long-eared *Plecotus auritus* and the first *Pipistrelle* recorded in the Purbeck quarries was found in December. 2 Brown Long-eared and 1 Whiskered/Brandt's were caught by a cat at Puddletown. 1 semi-torpid ♂ Brown Long-eared was found in a shed in Purbeck and another ♂ was found drowned in a water tank in Purbeck.

20. **Barbastelle** *Barbastella barbastellus*. One was found in a roost in Central Dorset in April.

22. **Grey Long-eared Bat** *Plecotus austriacus*. A ♂ of this species was found dead at West Bexington and another was found alive in a church near Dorchester.

27. **Stoat** *Mustela erminea*. A stoat was recorded crossing a road near Beaminster in July; it was carrying a young dead rabbit. Other reports were from Chettle, Farnham, Tollard Green and Tarrant Hinton. One was observed for about 10 minutes in March in an old quarry near Langton Matravers; it was investigating scree, boulders and going into a hole and was briefly mobbed by a Black Redstart.

28. **Weasel** *Mustela nivalis*. In April one was seen going into a hole on Black Hill; small pieces of bracken and grass were scattered outside, was it breeding there? Some road casualties were reported and one crossing the road at Winterborne Herrington and one crossing the road at Woolland Hill.

30. **American Mink** *Mustela vison*. One light coloured specimen was seen in March on the Winterbourne road at Winterbourne Houghton.

45. **Roe Deer** *Capreolus capreolus*. Reports for this species have been submitted for 15 one kilometre squares not previously covered.

Rabbit *Oryctolagus cuniculus*. Records for rabbits are widely distributed in the County but the map shows how many of the records are pre-1980 with no reports submitted since for these squares. Mr and Mrs Teagle have supplied records in 1989 for 24 squares either

without previous records or only pre-1980 records. They reported 8 rabbits at the edge of a disused quarry at Langton Matravers, 4 of which were black. Numbers seem quite high in a few places and only a small number were reported with Myxomatosis.

56. **Red Squirrel** *Sciurus vulgaris*. Mrs K. B. Parkyn has reported on the Red Squirrels on Brownsea Island and the observations of the voluntary wardens. There has been a dramatic drop in the numbers of sightings – 251 as compared with 615 in 1988. Mrs Parkyn does not consider this is due to failure of the wardens to write their sightings on the board at Rose Cottage as there is a real drop in the sightings on the controlled walk done in the early morning on a set route. Wardens staying at Rose Cottage made 54 sightings on 19 walks in 1989 compared with 71 sightings on 12 walks in 1988. Brownsea has suffered much tree damage in this winter's gales and it will be interesting to try and record the affects this damage to trees may have on the Red Squirrel population. Sightings of groups of squirrels are well down in 1989.

57. **Grey Squirrel** *Sciurus carolinensis*. Four new squares have records supplied by Mr and Mrs Teagle in 1989 and a further Dorchester square has grey squirrels. I am sure they are more widespread than the map would suggest.

Cetaceans: The Durlston Country Park Wardens and friends have achieved a remarkable record of observations from Durlston Head, Anvil Point and in Swanage Bay and have recorded Bottle-nosed Dolphins (89) *Tursiops truncatus* in every month except July, August and September and there were possible in July. Eight were seen in May and the group had previously been recorded four times since December 1988. Whales, species not identified have been recorded and Pilot Whales (94) *Globicephala melaena* were recorded in January, March, July and August.

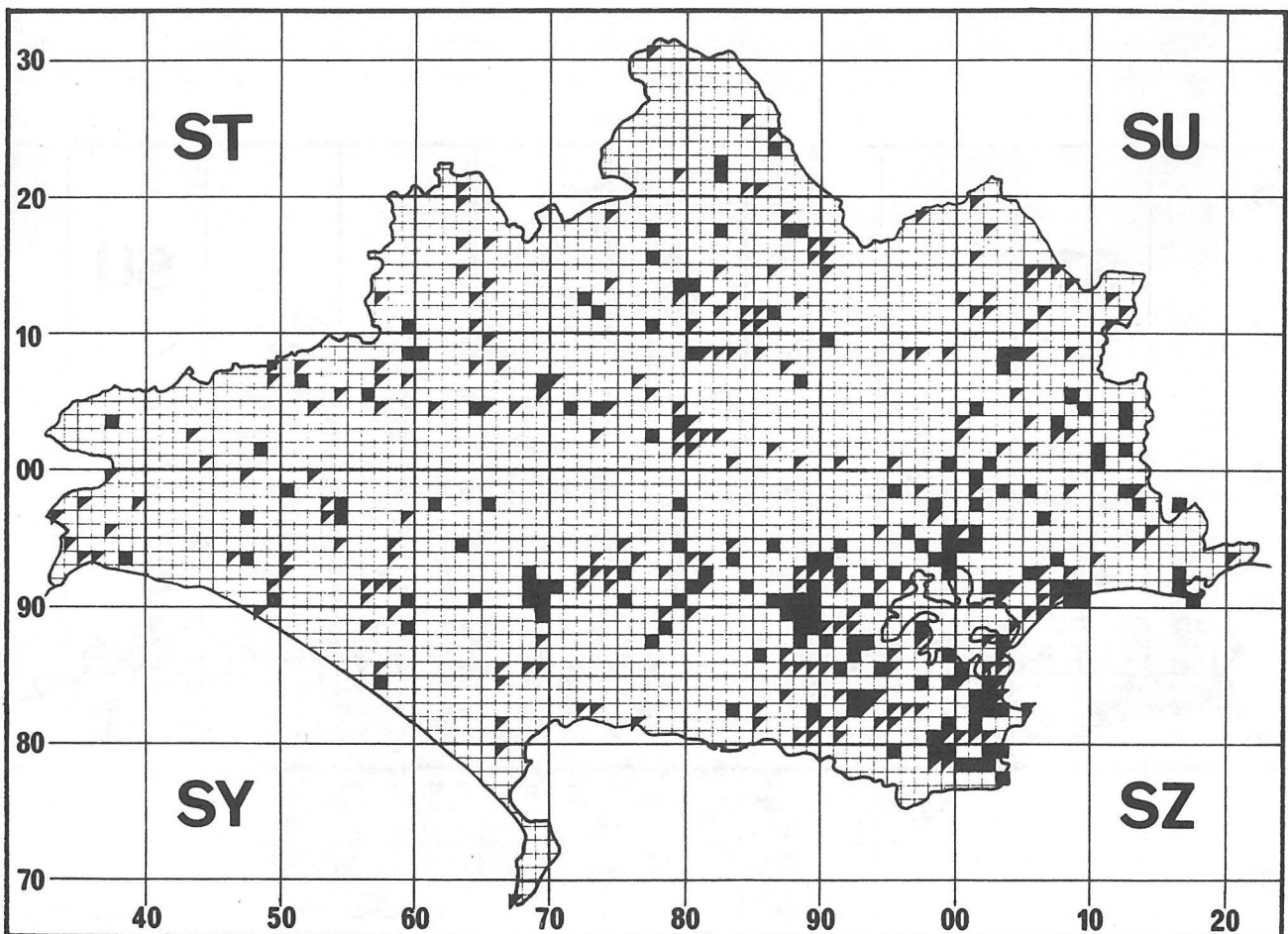


Figure 4. Grey Squirrel *Sciurus carolinensis*. Half-filled squares pre-1980 records, filled squares post 1980 records.

RAINFALL 1989
D. J. PAXMAN, MA

Statistics

The 1989 general rainfall in Dorset was 33.41 inches, 7 per cent less than the 1951-1980 average of 36.03 inches.

MONTHLY SUMMARY

	Rainfall (inches)	Average 1951-	Per cent of average	Number of days with thunder
January	1.54	3.83	40	0
February	3.81	2.89	132	1
March	4.14	2.76	150	0
April	3.22	1.98	163	3
May	.65	2.44	27	4
June	1.07	2.16	50	3
July	.95	2.22	43	3
August	1.76	2.86	62	3
September	2.21	3.35	66	3
October	4.17	3.41	122	0
November	2.38	4.07	58	0
December	7.51	4.03	186	4

The wettest station was Melbury House (42.65 inches), and the driest was Parkstone, Lilliput (25.98 inches).

GENERAL REPORT

For much of Britain 1989 was the warmest and sunniest year on record. It will be remembered by farmers for the severe shortage of hay and grazing, and by the general public for the unusually rusty appearance of the landscape and the threat of water shortage. It may therefore seem surprising that Dorset's 1989 rainfall was only 7 per cent below average. However, it was the third successive year with a deficit of rainfall. Over the two previous years rainfall in Dorset was only 88 per cent of average.

If the 1989 figures are considered in isolation, by the end of April rainfall was 11 per cent above average. The dry summer resulted in a deficit of 21 per cent by the end of September, which was then reduced to 7 per cent by the very wet days from 11th to 24th December. A truer picture is had by taking into account the dry months of November and December 1988. If this is done the April surplus becomes a deficit of 22 per cent, increasing to 33 per cent by the end of September. The wet December then reduces the deficit for the 14 month period to 19 per cent. At no time was the rainfall account in credit.

May (.65 inch) was the driest in Dorset since 1944, and the fifth driest since our records began in 1856. The driest was May 1896 (.17 inch).

Absolute droughts occurred from May through to the onset of the December rains. The principal periods were:

- (1) From May 12th for 19 days along the coast.
(At Portland drought began on May 1st and lasted 30 days. Inland the thunderstorms of 22nd to 24th prevented a drought.)
- (2) From June 11th for 15 days.
- (3) From July 8th for 33 days along the coast and inland in the south-east to Wareham and Hurn; 21 days in other inland areas.
- (4) From November 20th for 21 days at all stations. A drought so late in the year is very rare.

There was only one measurable snowfall during the year. This is mentioned below in connection with the exceptionally low barometric pressure on February 25th.

Occurrence of thunder on 24 days was very close to the recent average.

EXCEPTIONALLY LOW BAROMETRIC PRESSURE

An exceptionally low barometric pressure of 948.8 millibars was recorded at Portland RNAS on February 25th 1989. It was the lowest pressure anywhere in southern Britain within living memory.

From 24th to 26th February the British Isles were at the centre of an enormous multi-centred low pressure system extending from Jan Mayen to North Africa and from the Ukraine almost to Newfoundland. During the daylight hours of 25th one of the depression centres moved along the south coast of England, deepening as it approached Dorset from the west, and then beginning to fill as it continued away eastwards. At 1500 GMT Portland RNAS recorded the pressure of 948.8 millibars.

To the north were two other centres – a small one of 955 mil-

libars west of the Outer Hebrides and a larger one over the North Sea just east of Aberdeen. The pressure here was 949 millibars, within a millibar of the centre affecting Dorset. However, at that latitude such an event is less rare. As recently as 1982 pressure in north-west Scotland fell to 936 millibars (Burt 1983). In 1886 pressure at Belfast fell to 927.2 millibars (Burt 1983). In 1986 the pressure at the centre of a depression between Greenland and Iceland is known to have been below 920 millibars, and was assessed as being 916 or even 912 millibars. S.D. Burt (1987) wrote, 'As far as can be ascertained, this is the lowest barometric pressure known ... in the North Atlantic Ocean, and very probably the lowest in the world outside of tropical storms (and possibly the centres of violent tornadoes)'.

The most recent comparable low pressure in southern England was 956 millibars in Devon at the centre of the depression which occasioned the storm of October 15th-16th 1987 (Paxman 1987).

At Greenwich, where barometric records go back to 1811, a pressure of 948.7 millibars was recorded in the early morning of December 25th 1821. It can therefore be said that the low pressure of February 25th 1989 was comparable with that of December 1821 and is probably the lowest in southern England since that occasion.

To return to the events of February 1989: it is surprising that such a low pressure was not accompanied by vicious gales. In fact there were severe gales further south, affecting the Bay of Biscay, Portugal and Spain, but across the south of England the pressure gradient was comparatively slack, whilst the midlands and most of Wales had only light variable winds in a col of 957 millibars.

Precipitation over Dorset was also unremarkable. At only a single station did the total reach an inch of rain. (Forde Abbey 1.03 inches). At Cattistock the fall was .86 inch, mostly between 1130 and 1930 GMT. Heavy rain was interspersed with sleet and snow. Cold polar air was drawn southwards in the wake of the depression giving Dorset its sole measurable snowfall of the winter. At Cattistock there was a half inch cover at 2030 GMT. Snow showers during the night resulted in a cover of one inch by morning. Similar falls were reported from Cerne Abbas, Wraxall and Dorchester. The snow all melted away during 26th.

References

- Burt, S. D. (1983) New UK 20th Century Low Pressure Extreme. *Weather*, 38, pp. 209-213.
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 Paxman, D. J. (1987) Rainfall 1987. *Dorset Proceedings*, 109, pp. 143-145.

HEAVY FALLS OF RAIN

May 22nd-24th

During these days Britain lay between anticyclones on the Atlantic and over Scandinavia. A trough extended north from a thundery low over Spain to give thunderstorms in southern England, accompanied on the final day by some spectacular but localized heavy rain.

On 22nd thunderstorms developed away from the coast but only two stations had over an inch of rain (Marnhull 1.15 inches and Shillingstone 1.01 inches).

Next day there were more thunderstorms but little in the way of rain.

On 24th two areas in the south of England experienced thunderstorms with very heavy afternoon rainfall within short periods of time. At Farnborough, Hants, 2.37 inches were recorded, most of this within a period of 100 minutes. The other and more notable occurrence was in North Dorset. At East Stour, two miles south of Gillingham, 2.41 inches fell in 100 minutes, 1530-1710 GMT. Further west 1.10 inches fell at Marnhull, but the heaviest fall was at Leigh where 2.60 inches fell in 90 minutes, 1645-1815 GMT. The Mill House, Yetminster, had 1.96 inches, mostly in the hour from 1700 GMT, while at nearby Old Mill House 1.81 inches were recorded. These five stations were the only ones in Dorset to have over an inch of rain on this day.

The following account of the storm as seen from East Stour is adapted from a letter from Mr R. Brown published in *Weather* (Vol. 44, p.458):

Cumulonimbus development was very pronounced and by 1500 GMT it became overcast with the first rumbles of thunder. Huge spots of rain began to fall spasmodically at 1530 GMT, erupting into a continuous downpour of tropical intensity by 1535, accompanied by constant thunder and lightning. 13.9 mm (.55 inch) of rain had fallen by 1600 GMT and the temperature had plunged from 27.8 to 18.9 degrees C. Bursts of hail soon added to the onslaught

Rainfall in Dorset 1989

STATION	OBSERVER OR AUTHORITY	Greatest Fall in 24 hours		Days with .01 in. or more	Days with 1 in. or more	DEPTH OF RAINFALL IN INCHES												Total for Year
		Depth	Date			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Blandford (Tarrant Rawston)	J. H. Cossins	1.60	13/12	140	2	1.44	4.23	4.14	3.52	0.25	1.62	1.30	1.26	1.39	4.39	2.16	7.75	33.45
Bournemouth (Hurn Airport)	Met. Office	1.61	13/12	135	4	1.36	3.15	3.68	2.66	0.48	1.50	1.15	1.59	1.45	3.45	2.21	8.03	30.71
Branksome (Bourne Valley)	Southern Gas	—	—	—	—	1.45	3.00	3.82	3.26	0.31	1.47	1.02	1.14	1.54	3.97	2.33	7.72	31.04
Bridport (Bradpole)	G. R. Smith	1.88	11/9	111	5	1.66	3.85	3.86	2.98	0.19	0.92	0.84	2.59	4.10	3.80	2.11	7.51	34.41
Cattistock (Lankham House)	J. F. Willows	1.54	11/9	147	—	1.71	4.39	4.39	3.65	0.43	1.37	0.73	1.50	3.65	3.24	2.41	6.39	33.85
Cerne Abbas (Abbot's Walk)	D. H. Paul	1.39	13/12	140	4	1.77	5.32	3.98	3.73	0.41	1.09	1.21	1.51	2.65	4.95	2.76	7.86	37.24
Charminster (Hill View)	Mrs Everleigh	1.30	13/12	—	5	1.59	4.39	4.79	3.33	0.23	0.90	0.50	1.53	2.40	4.32	2.30	7.30	33.57
Dewlish (Parsonage Farm)	M. Britton	1.10	13/12	124	1	1.77	4.09	4.92	3.58	0.47	1.02	0.91	1.46	1.85	4.13	2.44	7.44	34.09
Dorchester (Waterworks)	Wessex Water	1.46	13/12	—	—	1.81	3.52	3.78	3.15	0.21	0.79	0.44	1.44	2.35	0.66	2.47	7.63	28.26
Dorchester (Weatherbury Way)	J. R. Oliver	1.32	13/12	144	5	1.71	4.10	4.43	3.21	0.19	0.91	0.38	1.51	2.37	4.48	2.42	7.72	33.43
Durlston Country Park	—	2.02	13/12	135	4	1.35	2.61	3.37	3.14	0.12	0.70	0.62	1.44	1.63	4.87	2.37	7.02	29.24
Evershot (Melbury House)	S. Rayner	2.10	13/8	149	7	2.13	4.28	5.11	3.70	1.38	1.73	0.90	3.81	4.59	4.42	2.33	8.28	42.65
Forde Abbey	M. Roper	1.80	20/12	144	6	1.61	4.74	4.37	3.48	0.30	1.26	1.22	2.03	2.95	4.39	2.74	8.49	37.57
Frome St Quintin	D. Pearman	1.64	13/12	148	5	2.24	5.12	5.20	4.05	0.53	1.39	0.96	2.27	3.06	4.46	2.43	8.46	40.17
Langton Matravers (Leeson House)	Mrs D. M. Kerridge	—	—	154	5	1.59	3.06	3.96	3.25	0.36	0.96	0.61	1.23	1.77	5.22	2.91	7.55	32.47
Leigh (Denbury House)	Lt-Col. B. H. T. Barlow-Poole	2.60	24/5	116	5	1.66	4.29	3.93	3.23	2.92	1.22	1.97	3.06	1.88	3.57	2.11	6.41	36.25
Lyme Regis (Pinhay), Devon	Mrs Allhusen	1.42	14/9	138	4	1.99	3.83	4.05	3.17	0.07	0.91	0.96	2.30	2.85	4.26	2.50	7.50	34.38
Maiden Newton (Wraxall, Manor Farm)	Lt-Col. J. T. A. Wilson	1.48	13/12	149	5	2.11	4.72	4.60	3.79	0.39	1.41	0.75	2.31	3.48	4.46	2.37	7.77	38.17
Marnhull (Crown Road)	G. W. Payne	1.35	13/8	157	6	1.80	3.74	3.33	3.00	2.58	0.94	1.16	2.22	1.82	4.23	1.90	7.73	34.45
Milton Abbas	K. Battrick	1.61	13/12	103	2	1.73	4.59	4.78	3.78	1.11	1.74	0.91	1.56	1.97	4.63	2.73	8.07	37.59
Minterne	The Lord Digby	1.63	13/12	122	3	2.06	5.22	4.74	1.55	0.50	1.39	1.24	2.12	2.27	4.78	3.20	6.30	35.37
Parkstone (Lilliput)	R. J. O. Crew	1.26	13/12	138	2	0.88	2.49	3.36	3.24	0.24	0.64	0.78	0.89	1.32	3.39	1.90	6.85	25.98
Portland Bill	HM Coastguard	1.48	13/12	130	2	0.98	2.23	3.61	2.65	0.05	0.80	0.65	0.89	1.33	4.48	2.35	6.40	26.43
Puddletown (Bardolf Manor)	H. G. Wood-Homer	1.36	13/12	145	4	1.68	4.67	5.12	4.02	0.35	1.01	0.70	1.41	1.89	4.15	2.83	7.83	35.67
Shillingstone (Green Hills)	E. Nimmo	1.89	6/7	151	6	1.28	3.90	3.90	3.43	1.43	0.98	1.96	2.18	1.22	4.42	2.10	7.42	34.22
Swanage	Met. Officer	1.78	13/12	132	2	1.33	2.82	3.26	3.07	0.14	0.75	0.53	1.16	1.50	4.85	2.49	6.65	28.55
Wareham (East Stoke, River Laboratory)	Freshwater Biological Association	1.87	13/12	140	4	1.21	3.74	4.44	2.98	0.31	0.72	0.53	1.07	1.47	5.11	2.61	8.37	32.55
Wareham (Trigon)	G. P Sturdy	1.65	20/12	123	4	1.11	3.45	4.16	2.94	0.50	0.76	0.41	1.50	1.23	4.24	2.52	7.29	30.12
Weymouth (Cranford Avenue)	H. F. Middleton	1.38	13/12	134	5	1.08	2.98	3.79	2.68	0.05	0.56	0.45	1.54	2.65	4.09	1.97	7.40	29.25
Weymouth (Westham)	A. J. Coe	1.33	13/12	131	3	1.00	2.87	3.85	2.70	0.07	0.53	0.41	1.62	2.61	3.79	2.16	7.43	29.06
Wimborne (Corfe Mullen, Central Avenue)	A. H. Dunn	1.49	13/12	153	6	1.38	3.28	4.08	3.28	0.45	1.52	1.88	1.47	1.46	4.30	2.58	8.53	34.21
Winfrith (Atomic Energy Establishment)	M. Rodgers	1.57	13/12	147	5	1.28	3.84	4.40	3.06	0.56	0.73	0.61	1.56	2.73	4.88	2.91	7.89	34.44
Yetminster (The Mill House)	R. M. Clarkson	1.96	24/5	127	5	1.14	3.38	3.74	2.80	2.26	1.16	1.75	2.51	1.80	3.67	1.47	7.06	32.74
Yetminster (Old Mill House)	J. M. Bosworth	1.81	24/5	—	6	1.52	3.76	3.72	3.31	2.13	1.11	1.78	2.20	1.87	3.68	1.91	7.25	34.24
AVERAGE FOR THE COUNTY				137	4	1.54	3.81	4.14	3.22	0.65	1.07	0.95	1.76	2.21	4.17	2.38	7.51	33.41

in a now strongly gusting south-easterly wind (hail was reported to be lying six inches deep on the high ground around Shaftesbury).

As the deluge continued in eerily dark conditions, the roads became awash and impassable, vegetables and flowers were defoliated or submerged, and drains became blocked.

Gradually the rain died out and the storm rumbled away.

A further reading of the rain-gauge showed 47.2 mm (1.86 inches) to have fallen between 1600 and 1710 GMT, producing a total fall of 61.1 mm (2.41 inches) for the 1 hour 40 minutes duration of the storm.

July 6th

Pressure distribution of July 5th-6th was similar to that in the May situation described above. On 6th there were thunderstorms in several parts of Dorset. Seven stations had falls over the inch. Again the list includes Leigh (1.75 inches) and Yetminster (1.63 inches), but the largest fall was at Shillingstone (1.89 inches).

August 9th

At the end of a dry spell active cold fronts crossed the country from the north-west. Fifteen Dorset stations had over an inch of rain. The largest falls were at Bridport and Weymouth (Bradpole 1.69 inches, Westham 1.32 inches). There were a number of thunderstorms on this day.

August 13th

From 11th to 13th there was a large depression near Iceland. A series of frontal systems crossed Britain in the strong westerlies. On 13th there were thunderstorms with a fall of 2.20 inches at Melbury, 1.61 inches at Leigh and 1.36 inches at Yetminster. Altogether six Dorset stations had over an inch of rain while most of the others had less than half an inch.

September 11th

On this day the pressure gradient was slack over the British isles, with a shallow depression over northern France which caused thunderstorms in southern England. Six Dorset stations had falls over the inch (Bradpole 1.88 inches, Melbury 1.67 inches). At Cattistock the fall was 1.54 inches, of which 1.41 inches fell in 40 minutes.

December 13th

The late drought of November and December was maintained until December 10th, when the anticyclone which had been keeping the Atlantic depressions at bay transferred to the Balkans. On 11th the drought was broken by the approach of the first frontal troughs, though amounts of rain were not great. On this same day a small wave depression of 990 millibars appeared in mid Atlantic at Latitude 40 degrees North. By midday on 13th this had deepened to 966 millibars and the centre lay west of Ireland, with a deep frontal trough swinging round to advance across southern counties of England from the south. On this day every Dorset station reported over an inch of rain (a rare event). The heaviest falls were in Purbeck (2.02 inches at Durlston Country Park, 1.87 inches at East Stoke, 1.78 inches at Swanage).

December 19th & 20th

At midday on 19th a depression of 968 millibars dominated the north Atlantic, and a weak ridge of high pressure over England and Wales was moving eastwards ahead of the fronts of the depression. During the passage of the fronts sixteen Dorset stations had more than an inch of rain (Hurn 1.35 inches, Winfrith 1.26 inches).

During 20th the trailing cold front was slow to move away because of minor wave disturbances running along it. Further rain and showers accompanied by thunderstorms gave falls of more than an inch at six stations (Forde Abbey 1.80 inches, Trigon 1.65 inches).

The combined rainfall of these two days amounted to more than two inches at Forde Abbey (2.69 inches), at Dorchester, and over a large area bounded by Poole Harbour, Winfrith, Puddletown, Milton Abbas and Blandford, and extending into Hampshire.

THE NOTABLE GALE OF OCTOBER 28TH

On October 26th a shallow depression of about 1006 millibars, lying to west of Portugal, began to deepen and move north. By midday on 27th the centre, now of 995 millibars, was south of Eire and 24 hours later was in the North Channel, between Scotland and Northern Ireland, having deepened to 980 millibars.

Gales affected most parts of Britain. At Portland Bill a gust of 87 knots (100 mph) was recorded. Forty people were rescued from a container ship which foundered in heavy seas off Start Point. Winds of 50 knots (Force 10) overturned caravans and lorries near Dorchester. The system did not yield a high rainfall in Dorset.

Inevitably this gale will be eclipsed in popular memory by the Great Storm of October 1987 and by the destructive gales which followed it in the early months of 1990.

LATE REPORTS FOR 1988

	Bournemouth (Alderney Reservoir)	Wimborne (Stanbridge Mill PS)	Wimborne (Walsford Bridge PS)
	inches	inches	inches
January	6.83	6.23	6.24
February	2.07	2.10	2.36
March	3.71	3.10	3.45
April	1.52	1.17	1.20
May	1.28	1.41	1.37
June	.95	1.26	1.26
July	2.86	2.43	2.22
August	3.13	2.69	3.17
September	1.60	1.13	1.43
October	4.70	3.76	4.05
November	1.06	1.10	1.06
December	.93	.94	.90
Year's total	30.64	27.32	28.71

RAINFALL STATIONS

The former stations at Abbotsbury (East Farm) and Blandford (Bryanston) closed at the end of 1987. Buckland Newton (Brockhampton Gate) closed at the end of 1988.

Obituaries

Eric Arthur Gee, MA, D Phil., FSA (1913-1989)

Although never a member of the Society, Eric Gee, who died in York on 16 June 1989, deserves some memorial in these pages for the services he gave it before the war when, following his training at Maiden Castle under Mortimer Wheeler, he undertook the role of recorder for the excavations at Colliton Park under Drew and Selby in 1937-38. Later he returned to Dorset as an Investigator on the staff of the Royal Commission on Historical Monuments (England), to direct the Commission's excavations in the middle ward of Corfe Castle in 1951, on Wareham Town Walls in 1952-53, and at Milton Abbey in 1955.

Born in Staffordshire, and always proud of his Midlands origin and forthright speech, his interest in architecture had developed as early as it had in 'dirt' archaeology, and his career in the Commission, when his military service ended, largely followed that course. Most of it was in York, as

founder and head of the York office from 1950, the year in which he received his doctorate from Oxford for his thesis on the architecture of the Oxford colleges. A painstaking and wholly dedicated scholar, he will be remembered especially for his work for the Commission on York Minster, where his further private services during the 1967-72 restoration, as Honorary Architectural Historian, were recognised by the insertion, by the Dean and Chapter, of his coat-of-arms in a stained glass window in the south aisle.

Eric Gee's services to the various York and Yorkshire societies, of several of which he became President, and nationally to the Vernacular Architecture Group and the Advisory Board for Redundant Churches, were many; but, best of all, one remembers his ungrudging academic generosity, which made him eager to share his knowledge with all those who cared to hear him.

R.A.H.F.



Eric Arthur Gee at Colliton Park.

Jo Jones

Jo Jones, the painter, died in her Chelsea studio on 3 December 1989 aged 95. She was particularly noted for her drawings and paintings of the cave-dwelling gypsies of Granada in Spain and was equally successful in her studies of Moroccan life and landscape. She had a studio at her cottage in Long Bredy where she worked for over fifty years.

Violet Madeline Josette Jones was born at Knebworth in Hertfordshire on 13 February 1894, the daughter of Doctor Jones who was later Archdeacon of Chichester and Bishop of Lewes. She began to draw and paint when a young girl, spending some prize money on a visit to Jamaica where, inspired by the people and the scenery, she did some of her best early work. She studied both in Paris and in London where Walter Sickert and Augustus John gave her some tuition; probably Bonnard and Matisse were her chief influences. Exhibiting both in Paris and London she held her first one-woman show at the Wildenstein Gallery in London in 1938, subsequently having several shows at the O'Hana Gallery London and also in Zurich. Her last retrospective exhibition (at the Alpine Gallery) was held in 1985.

During the 1950s she spent four summers among the gypsies of Sacromonte in Granada and at Guadix where, as described by Augustus John she 'dared to visit the colony of farouche tatterdemalions' occupying the surrounding caves in order to paint the fusion of sound, colour and movement. This occasioned the publication of an illustrated book *The Gypsies of Granada* (Athelney Books 1969) with contributions by Augustus John, Laurie Lee, Sir

Sacheverell Sitwell, Professor Walter Starkie and Marguerite Steen. It was among the many gypsy cave dancers that she recognised the remarkable talent of Mario Maya and arranged for him to be trained in Madrid. He has since then become world famous as a flamenco dancer and teacher.

In 1963 Jo Jones visited Morocco to draw the strange rock formations in the Tafrouit valley. In Marrakesh she painted scenes of the wool dyers with their vats of vivid colours. A successful show was held in Rabat. After a short stay in La Jolla she worked on several paintings of the Southern Californian country.

Her working life spanned seven decades. Many of her works are in private collections in Europe and the United States, also in public collections in Switzerland, France and America. Examples of her work can be seen in the Gypsy Museum at the University of Leeds.

During the first world war Jo Jones worked as a Land Girl in Dorset where she later inherited a beautiful thatched cottage. She built an adjacent studio and planted the garden with many roses and cottage plants. She has been described as a woman of remarkable and passionate character with immense determination, delighting in laughter and in the ridiculous and unconventional – 'pursued by her inexorable daemon' to quote Augustus John again. She left her cottage at Long Bredy to the National Trust to be enjoyed by others.

Several gifts were made at various times to the Dorset County Museum, where an exhibition of her Spanish paintings was held in 1972.

G.T.



Violet Madeline Josette Jones 1894-1989.

Philip Whatmoor 1934-1989

All who knew Philip Whatmoor will be saddened to hear of his death in June 1989 after a short but valiant fight against cancer. He was an enthusiastic member of the Society from 1962, and was the co-author of the classic work on Dorset clocks and clockmakers.

The Whatmoor family moved to Dorset in 1962, at once joined the Society and have contributed much to our activities in the succeeding years. Philip served on the Council of the Dorset Natural History and Archaeological Society from 1963 until 1965, whilst he was the secretary and organiser of the Society's junior section. It was at this time that he began his study of Dorset clocks and clockmakers which was to continue after he joined British Petroleum and started a successful career in the oil industry which took him away from Dorset.

He was a founder member of the Dorset Clock Society, which meets regularly in the Museum, and was its Chairman until his death. His study of local horology culminated in the publication, together with Tom Tribe, of *Dorset*

Clocks and Clockmakers in 1981.

Philip's interest in collecting glass led him to join the Glass Circle: he served on the Committee of the Glass Circle for nineteen years, for thirteen of these as Treasurer. A particular enthusiasm of his was for musical glasses on which he lectured to the Glass Circle and gave a lecture tour in America in October 1988.

Just as Philip's arrival in Dorset had stimulated new interest, it was inevitable that when his career involved a stay in the Far East, this too should encourage new enthusiasms. While living in Canton Philip became a founder member of the Canton Arts and Historical Society, a branch of which he founded in London on his return. Latterly he shared with his brothers in the developing of the Cider Museum at his brother Derek's nursery at Owermoigne.

Philip's enthusiasm, erudition and capacity for friendship will be much missed by his many friends, and we extend our deepest sympathy to his brothers, Richard and Derek, and the family.



Philip Whatmoor 1934-1989

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